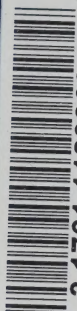


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1967.





The Economic Process





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THE ECONOMIC PROCESS

prepared in the

OFFICE OF THE CHIEF ECONOMIST

ONTARIO DEPARTMENT OF ECONOMICS AND DEVELOPMENT

Queen's Printer, Toronto

1967

Price 50c

Copies obtainable from

Information Services Branch

Department of Economics and Development

950 Yonge Street

Toronto

Preface

In 1966 the Department of Economics and Development published The Economy of Ontario, initially prepared by Leonard E. Dudley. It sought to describe the forces determining the pattern and pace of economic activity in Ontario without introducing the body of economic laws or theories commonly used to rationalize these forces.

This book is intended as a companion piece to The Economy of Ontario. It seeks to provide both for secondary school students of economics and the general reader a simple description of what the economic process is and how it works. The approach used is first to provide a concept of the economic process in its simplest form; and then gradually to increase the complexity of this concept in such a way that the relation to the whole process of each topic discussed is apparent.

As with its companion piece, the cost of printing this book was shared by the Department of Economics and Development and the Department of Education.

I am deeply indebted to the many colleagues who have rendered invaluable assistance in the task of trying to provide a simple explanation, correct within the limitations of this book. The responsibility for any remaining errors and for opinions expressed is, of course, my own.

Beryl L. Joyner

Office of the Chief Economist

DEPARTMENT OF ECONOMICS AND DEVELOPMENT

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Introduction

Economics has been defined in a number of different ways. This book is written from the viewpoint that the main concern of economics is the creation and distribution of real wealth. It is therefore necessary to distinguish clearly between money and real wealth.

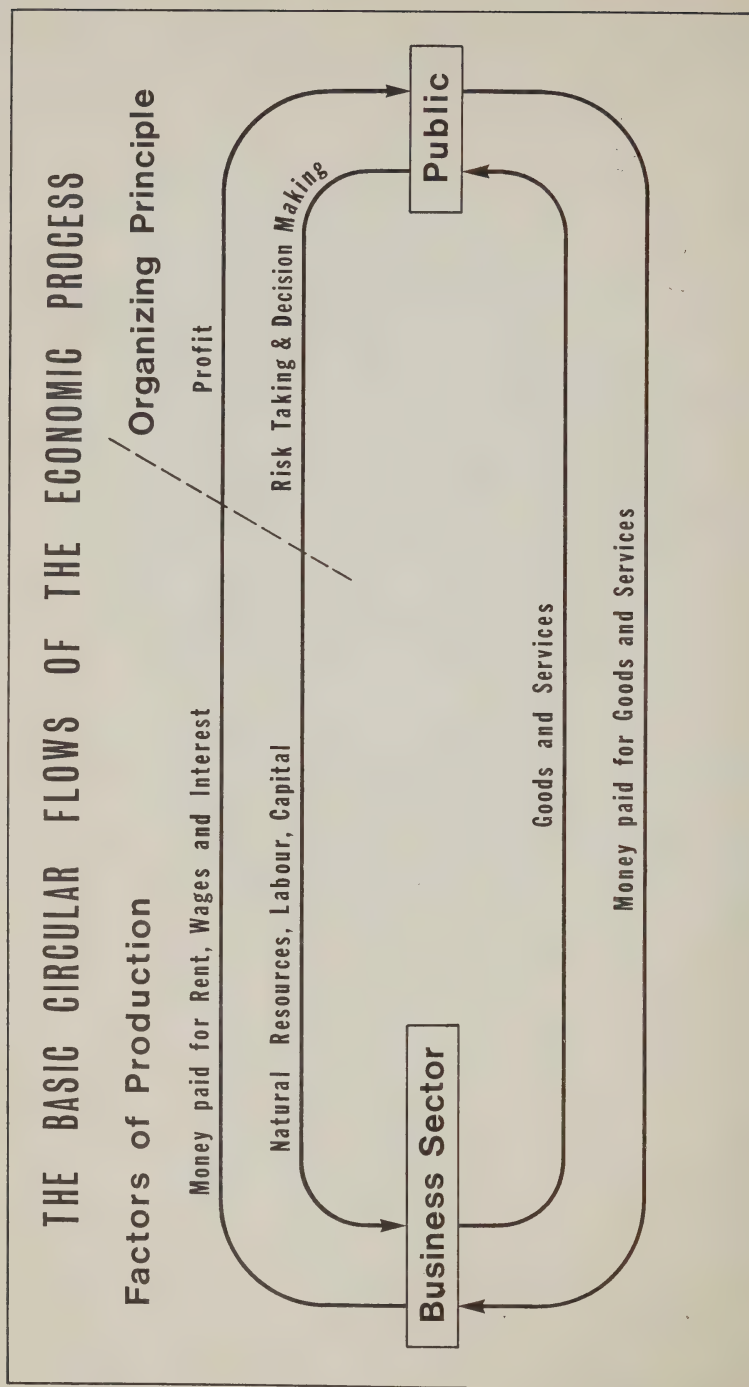
Real wealth is goods and services, things which are of material value to us: first, the things which make life possible—food, clothing, shelter; and beyond that, the things which make life pleasant and comfortable.

Money is not value. You cannot eat a dollar bill. But money represents value, it stores value, and it is a way of exchanging value. A dollar bill represents the value of the food you can buy with it. And if you do not need the food immediately, the simplest way to store its value is to keep that value in the form of the dollar bill until you do need it; when you need it, you simply exchange the dollar bill for the food.

There would be no point in creating money if it would not buy anything; and obviously, we cannot distribute what we have not got. So if we want people to have plenty of goods and services, what we must create is real wealth.

Real wealth does not happen by itself. It is the production of man. It happens only as a result of human activity.

DIAGRAM 1



1/The basic circular flows of the economic process

As its name implies, this diagram represents the economic process in its simplest form. It offers a first insight into the kinds of human activity that are necessary to produce and distribute real wealth.

On the right-hand side is written PUBLIC, of which we are all members. And on the left-hand side is written BUSINESS SECTOR where, in our type of economy, most goods and services are produced.

Three things are necessary to produce real wealth. The economic terms for them are land (that is, natural resources) labour, and capital. These three are called the *factors of production*.

Today, in one form or another these factors belong to people. And if they are to produce goods and services, then these three factors must flow from the PUBLIC to the BUSINESS SECTOR. This is represented on the diagram, on the left-hand side of the inner and upper arrow.

Once the BUSINESS SECTOR has turned the *factors of production* into goods and services they must flow back from the BUSINESS SECTOR to the PUBLIC. This is represented on the diagram on the inner and lower arrow.

This inner circle represents the flows that are necessary to produce and distribute real wealth.

The BUSINESS SECTOR pays the PUBLIC for the *factors of production* which it uses. This is represented on the diagram, on the left-hand side of the outer and upper arrow. Money paid for the use of land is called rent; for labour, wages; and for capital, interest.

Money paid to people in the form of rent, wages, and interest is income—the money we have to spend. We spend it buying the goods and services we have helped to produce. This is represented on the diagram, on the outer and lower arrow.

The outer circle represents the flow of money which accompanies and makes faster and more efficient the flow of real wealth. Without money people would have to barter. If you sold your labour you might be paid with a coat or a cow. And if you were paid with a cow and wanted to buy a loaf of bread, making change would be rather difficult.

The organizing principle in our type of market economy is risk taking and decision making. It is the businessman who decides what goods and services will be produced with the *factors of production*. In making

this decision he takes a risk. If he produces goods and services that you and I will not buy he suffers a loss; if he produces goods and services we want to buy, he makes a profit.

Together with the use of the *factors of production*, there flows from certain members of the PUBLIC into the BUSINESS SECTOR the ability to take risks and make decisions; and in return there flows back from the BUSINESS SECTOR to the PUBLIC another form of money income which we call profit.

We can learn a good deal from this first idea of what the economic process is and how it works. We can see at once that the economic process depends on us as producers. The goods and services we need and want do not exist until we have helped to produce them. And the more each of us is prepared to contribute to production, the more goods and services there will be for our use and the wealthier we will all be.

Since everyone needs some goods and services to stay alive, we can also see that the economic process depends on all of us as consumers. Just how much it depends on us as consumers is emphasized by the organizing principle of our type of economic process. Since the businessman must please the customer if he is to stay in business, the buying decisions which we make as consumers affect the ultimate decision as to how our economic resources will be used.

Moreover, which goods and services are being produced affect what kinds of jobs are available, so the way we spend our money helps to determine how much we can earn.

To sum up, this basic circular flow explains why for our economic well-being we all depend on one another.

The Factors of Production

LAND

Ontario has an especially fortunate combination of natural resources. The province is generously supplied with minerals, forests, water, and farmlands. The abundance and variety of natural resources combined with the province's geographic location has been the reason why economic development has been more diversified and complex in Ontario than in any other section of Canada.

Man's first requirement is food. Before an area can support the dense, urban populations necessary for industrial and service production, it must be able to feed them. Ontario has been able to do this, not only because of its rich farmlands, but because its agricultural industry has become increasingly efficient.

Ontario is Canada's leading mineral producer and the world's lead-

ing producer of nickel. The province is also rich in zinc, gold, silver, copper, iron, and uranium; while much of this mineral production is exported, it also helps provide a solid base for domestic industry.

Northern Ontario has more than 100,000 square miles of valuable forest producing about one quarter of the value of Canada's forest industry production.

Low cost electric power is a prime requirement for most manufacturing industries. In particular, Ontario's important smelting and refining, and pulp and paper industries need large quantities of electricity; and the pulp and paper industry also requires large quantities of water for industrial use. The large population necessary for industrial development needs water for consumption and for recreation. Abundant water resources in countless lakes and rivers make it possible for Ontario to meet all of these needs.

Ontario is centrally located with good air, land and water routes linking it with markets in the other provinces. The St. Lawrence Seaway provides an outlet to the Atlantic and world markets. And just across the Great Lakes is a potential market of more than 70 million people in eight neighbouring American states. This location, in relation to domestic and export markets, makes it economically feasible to exploit almost all of the province's natural resources.

But natural resources are not wealth. They become wealth only when human activity turns them into the goods and services we need and want. A potential market will remain just that unless we actively sell our products in it. For these two reasons human activity is the most important single element in the economic process.

LABOUR

Human activity in the economic process is carried out by the *labour force*. This is a broad economic term which covers everyone who sells his time and his skill. The factory worker, the manager, the miner, the secretary, the banker, the farmer, the teacher, the scientist—even the economist, is important to the economic process.

Relative to its supply of natural resources, Ontario is short of skilled labour. Its population is growing rapidly but it is still only about 7 million, and the *labour force* is approximately 2.7 million. To increase the *supply* of skilled labour, we must improve the level of skill and education of our present and future *labour force*, and to fill gaps, we must encourage skilled immigrants to join us.

Ontario attracts about half the immigrants who come to Canada—an indication that our economic performance compares favourably with that of other provinces.

More than 36 per cent of Canada's *labour force* works in Ontario.

But if we are to take full advantage of our natural resources and good location we must continue to encourage more people to join the *labour force*. One of the largest recent additions to the *labour force* is the number of women who have remained at work or returned to work after marriage.

We must also improve the level of skill and education of our *labour force*. This need is becoming increasingly apparent because technology has become the most important factor influencing economic growth. With technological change increasing at a faster and faster rate it is possible to increase real wealth more and more quickly. However, modern equipment is useful only in the hands of skilled operators. It should be emphasized: no machine is better than the person who operates it.

Everyone who sells his time and skill is contributing a *factor of production*, labour, to the economic process. This is part of the reason why, for our economic well-being, we all depend on one another. Because the quality of labour is of prime importance, great emphasis is being placed on education.

First, modern machines are very expensive. They represent a good deal of invested capital. A skilled operator is required to use these



Ontario's forest harvest moves downriver to the mill.

highly productive machines because only high output can make them pay, and in return, justify high rates of pay for those who operate them. This is why good jobs go to the highly skilled.

Second, because of the increasing rate of technological change which we depend on for our fast-growing wealth, specific skills can soon become obsolete. Persons entering the work force today should be prepared to retrain three or even four times. A good general education is the best preparation for this. It is the ability to recognize and define a problem and know how to go about seeking solutions, that will best equip people for retraining.

It is worth remembering that technological change is not increasing the unemployment rate. In Ontario alone, employment increased by approximately 300,000 between 1962 and 1967. What technological change is causing is a rising *demand* for skill. *Demand* for unskilled labour is falling and will continue to fall at an increasing rate. It is also worth remembering that the lowest paid group in the country is that which has the least education.

On the other hand, persons with sufficient training and education to command skilled jobs receive better incomes and in addition find challenge and satisfaction in their work. They develop new confidence in themselves and, looking at the world with new eyes, find their interests expanding. They tend to discover that their own country (and the world) is full of interesting places to visit, foods to taste, books to read, people with many different viewpoints to meet, sports to learn, music to hear, paintings to look at. They also find that they have the extra income to pursue their interests and that they have more to contribute as individuals to the solution of social problems and the development of a civilized society.

Ontario is making progress in improving the level of skill and education of its work force. Almost three quarters of the 15 to 19 year age group is now enrolled in secondary schools, and about 13 per cent of the 18 to 21 year age group is enrolled in university. But many more people are capable of benefiting from one of the several kinds of post-secondary education. Enrolling in a College of Applied Arts and Technology is one way of taking advantage of post-secondary education. We also have an On-the-Job Training Program jointly sponsored by the federal and provincial governments to help firms retrain their employees and upgrade educational levels where necessary. Facilities for adult education and retraining have also been established and valuable experience has been gained from these early projects.

Under the new Occupational Training Act, it is expected that the federal and provincial governments will cooperate to greatly extend the facilities for adult retraining. The core of this program will be a

skill course, up to a year in length. If necessary, the trainee may also spend up to a year improving his general education before taking the skill course. There will be no tuition fees.

Third, because we all depend on one another for our economic well-being, it is important to understand the parts each of us plays in the economic process. Knowing the probable effects of our actions will help us in making personal economic decisions. When we understand how the economic process works, it will be easier to form an opinion on economic policy and to make decisions as a voter and a tax-payer. When most people are making constructive economic decisions, it is more likely that the economy will expand smoothly and rapidly. When this happens, everyone is better off.

Producing wealth may not be the most important thing a nation does, but unless it does produce wealth, it cannot afford to do much else.

Fourth, we must learn how to make the best use of our wealth. Society needs wealth if it is to make social and cultural progress. The individual needs a certain amount of wealth before he is free to develop himself as a human being. But wealth of itself will not provide these things. The individual must find out for himself who and what he is and what kind of a society will best suit his needs. In the best sense of the words, these are tasks for educated persons.

Two kinds of human activity carried out by the *labour force* need special mention—that carried out by the manager and that by the businessman or, to use the economic term, the *entrepreneur*. Sometimes these functions are carried out by the same person or group of persons, and sometimes by different people who work closely together.

It is the manager's job to plan and organize. You cannot even make a cake without planning to have all the necessary things together in the right place at the right time. And planning for economic production is a most complex task. The efficient manager hires good staff, provides methods for proper communication between them, and sees that each person has adequate support and responsibility. He sees to it that all supplies are purchased at the best price and that they arrive at the right place just when they are needed. In this way he avoids having either men or material standing idle and so the largest possible amount of product or service is produced from any given quantity of resources. When this happens the maximum amount of goods and services is available for us to buy and it is produced as cheaply as possible. The producer's costs are therefore lower and so he can expect to sell more. For our economic development, we depend a great deal on the skill of our managers.

The *entrepreneur* is the man who decides what to produce and how much of it. He bases this decision on what he thinks he can sell at a

profit. Each time you buy something you contribute to this decision because each purchase has an indication to the *entrepreneur* that he can sell his product or service at the price you have paid. So long as he can sell it at a profit, he will go on producing it. If you stop buying it, the *entrepreneur* has to stop producing it because, unless he can sell it, he has no way of paying himself an income in the form of profit, or of paying for the *factors of production* he is using. You can see this process in operation all the time as new products appear on the market and old ones disappear.

Since resources are used up every time a good or service is produced, each time you make a purchase you cast a vote on how the resources of your country will be used. The *entrepreneur* does not just count these votes. He has to judge ahead of time what they will be because he has to make the product first. You vote for it after it appears on the market. It is also up to the *entrepreneur* to enlarge his market and draw additional *factors of production* into the circle of flow by increasing his exports. For our economic development we depend a great deal on the skill of our *entrepreneurs*.

CAPITAL

In verbal shorthand and in accounting terminology capital is often spoken about as though it were money. This is possible because money is a convenient way of representing, storing and exchanging value. But you cannot produce anything with a dollar bill any more than you can eat a dollar bill. In real terms, capital is plant, equipment and machinery.

A society builds up its stock of capital by saving. Saving is the difference between how much we can produce now and how much of that production we decide to consume or use up now. Canada saves about 20 per cent of its *Gross National Product*—that is, about 20 per cent of the total value of its production in a year. This is a high rate of saving, nearly 5 per cent higher than the corresponding rate in the United States. But because our population is small, and because we still have vast natural resources waiting to be turned into wealth, the dollar amount of our national saving is still relatively small.

To produce, we depend on the amount of capital stock we already have and the amount of new capital *investment* we can make. With each addition of new capital *investment* we accumulate or build up a larger and larger capital stock, and as this stock becomes larger our ability to produce increases.

If we invested only our small amount of national saving this would have two effects: the flow of new capital *investment* would be smaller and the rate at which we could accumulate capital stock would be

correspondingly smaller. As a result, the rate at which we could increase our wealth would be slower. Canadian living standards would suffer and there would probably be less money to spare for social and cultural development. We might also find that larger numbers of our skilled work force would be attracted by higher living standards in the United States. This would further slow down Canadian economic development. It is against this background that problems connected with American *investment* in Canada must be considered.

The vague complaint that "Americans own too much of our industry" is a nationalistic attitude that Canadians are perfectly entitled to hold if they wish. But it is not a valid economic statement unless it can be backed up by an economic explanation of what is "too much" and what economic drawbacks are attached to American ownership. Of course, if Canadians choose to devote more of their time, energy, money and initiative to Canadian economic development, the percentage of foreign ownership will automatically drop without a damaging fall in *investment*.

The *Report of the Royal Commission on Taxation*¹ (the Carter Report) mentions some of the economic difficulties that are associated with foreign *investment* in Canada. The export of goods manufactured by Canadian subsidiaries can be affected by decisions of the United States government. Canadian subsidiaries are sometimes said to import goods and services rather than purchase them at competitive prices in Canada: and to be reluctant to compete in export markets against parent firms. The Commissioners doubt if these problems exist because of foreign investment as such. They think the difficulties often arise because the Canadian tariff system encourages foreign companies to invest here and then protects them from foreign competition.

Some critics say that Canadian subsidiaries do not spend enough on research facilities and that their production facilities are not large enough to be as efficient as those of parent companies. Of course, these complaints imply that Americans ought to invest more in Canada.

When the U.S. guidelines policy was announced in 1963 there was concern that the Canadian economy would be damaged unless Canada gained exemption from this policy. The U.S. guidelines policy discouraged Americans from investing money outside the United States. In return for agreeing to limit the amount of *foreign exchange reserves* which the Canadian government holds, Canada did largely gain exemption from this policy. (*Foreign exchange reserves* are explained in Chapter 5.)

¹Report of the Royal Commission on Taxation, Vols. II and III (Queen's Printer, Ottawa, 1967).

In Chapter 5 we will also discuss how the American and Canadian economies are closely linked through trade. This link exists whether or not there is foreign *investment* in Canada.

When forming an opinion about foreign *investment* in Canada, it is important to weigh carefully the advantages and disadvantages; to separate out problems which affect branch plants in Canada but which do not necessarily result from foreign *investment*; and to consider how Canadians can reduce the percentage of foreign ownership if they wish to do so.

It is also important to remember that some Canadians have confused these purely economic considerations with the separate question of American influence on the Canadian way of life. Since we live next door to so powerful a neighbour we are constantly aware of American cultural and social attitudes; but whether we adopt them or not is for us to choose. After the Second World War, the Americans poured billions of Marshall Aid dollars into Western Europe. The Europeans used them to re-build European economies. The wealth generated by European economies then flowed into European social and cultural development.



Members of Ontario's labour force working in the electronics industry help to produce everything from large computers to the tiniest components.

2/How prices are determined in the business sector

We all know that prices are important because they determine how much and what we can afford to buy. It is equally important to understand that prices are partly determined by how much and what we actually buy; what we buy determines what goods and services will be produced; and what is produced determines what kind of jobs are available and how much we can earn.

When the *entrepreneur* decides what and how much to produce, we refer to this function as the *allocation of resources*. He allocates resources through the *price system*. Our kind of economic process is sometimes called the *price system* because it is kept running—lubricated as it were—by a continuous flow of decisions about what we are prepared to sell and how much we will charge for it, and what we want to buy and how much we will pay for it.

Most prices are determined in the BUSINESS SECTOR. The BUSINESS SECTOR is a broad economic term which covers the production and distribution of all goods and services, except those which are produced by government. The doctor and the architect who produce a flow of services are regarded as belonging to the BUSINESS SECTOR just as much as the factory worker who helps to produce goods. Goods are of two kinds. The things we normally buy in stores are called *consumer goods* because they will be used up or consumed by us. Other goods such as machinery, sand and concrete blocks are called *capital goods* or sometimes *investment goods*. The BUSINESS SECTOR uses *capital goods* in order to produce *consumer goods*. The price of services is determined in the same way as the price of goods.

We call this method of determination the law of *supply and demand*. To understand the principles of *supply and demand*, let us look at what might happen in a very small and simple market.

The Law of Supply and Demand

If a great many people want to buy oranges today, but only a small number of oranges are offered for sale, the prices will go up because there will always be some people willing to pay more to make sure

they get the oranges. This is called *rationing effect* of price because it is the price which determines who will get the oranges if there are not enough to go around.

If a great many oranges are offered for sale, and only a few people want to buy them, the price will fall because the vendor will want to sell his extra stock and he knows there will always be some people willing to buy more, at a lower price.

If there are several vendors selling oranges, the price will also tend to fall because each vendor will expect buyers to shop around until they find the best price.

If the price of oranges is high because they are in short *supply*, the people who could not or would not pay the high price tend to buy something else instead. If grapefruit are plentiful and cheap today, they may buy grapefruit. This is called the *substitution effect*. This *substitution effect* is most important because it explains why the price of one good affects the price of all other goods. If many more people than usual decide to buy grapefruit because the price of oranges is high, then the *supply* of grapefruit will be short, relative to the *demand*, and its price will go up—so some people will decide to substitute again, and so on.

We saw the *substitution effect* at work in our own food markets quite recently. Because insufficient hogs were brought to market, the price of pork rose. Many people decided to substitute beef for pork so the price of beef rose. People then began to substitute chicken for beef, and the price of chicken rose. When all food prices rise, people must either save less or spend less on other things.

Of course we cannot blame the hogs for all our troubles. Since people are very complicated creatures, a number of complications tend to arise in the economic process at the same time. But what happened when the price of pork rose is an interesting illustration of how the circular flow of real wealth through the economic process is governed by price decisions.

This same flow of price decisions also works to correct a shortage or a surplus of *supply*. If the price of oranges is high, the vendor will try to increase the *supply* of oranges because the more he can sell at a high price, the more profit he will make. It is likely that other vendors, attracted by the high price, will also try to *supply* more oranges. But as soon as they are successful, the shortage will disappear, and the price of oranges will fall.

The vendor who found himself with so many oranges that he had to sell at bargain prices to clear the market, will soon stop supplying so many. And when fewer oranges are available, the price will rise. Notice that the vendor selling grapefruit, who was affected by the price

of oranges in the first place, will react in the same way.

We can sum up these various forces at work in the market by saying that the seller is always seeking the highest price he can get and that the buyer is always seeking the lowest price he can find. These two opposing forces are a constant check on one another tending to balance the quantity of oranges supplied with the quantity demanded. The price will be just sufficient to clear the market. It will cover the supplier's costs and give him a reasonable profit. When this happens, we say the market is in balance, or to use the economic term, in *equilibrium*.

But that does not mean the market will stay in *equilibrium*. People might begin to dislike oranges and therefore stop buying them. Or there might be a technological improvement in the growing of grapefruit which lowered the cost of production and therefore the price of grapefruit. In this case people would tend to substitute by buying more grapefruit and fewer oranges.

Or there might be a fall in income, in which case people would have to buy less of everything, including oranges—or a rise in income, in which case they could buy more of everything, including oranges. Any one of these things, a change in tastes, a change in the price of other goods, or a change in income, will change the *demand* for oranges. In turn such a change will affect the *supply* and price of oranges, and the market forces will seek a new *equilibrium*. In doing so, a change in the *allocation of resources* will be brought about.

In the extreme case, if people just stopped liking oranges, growers would ultimately stop producing them. And the resources which had gone into their production—the land on which they grew, the fertilizer, the time and skill of the grower, the packer, the transport driver, the road he drove on, the truck he drove, and the time and skill of the seller would be used for other purposes.

If the seller, the transport driver, and the grower are operating their own business, and if they are skilled *entrepreneurs* they will perceive quite early that the *demand* for oranges is changing and will begin shifting their resources to other uses in order to lose as little as possible. In this example, the orange trees themselves would fall victims of change, but the other resources could quickly be diverted to producing something else. In deciding what to produce instead, the *entrepreneur* would be attracted by the good then selling at the highest price, because this would offer him the best chance of making the most profit. Let us say this good happened to be grapes.

If more people wanted to buy grapes than there were grapes for sale, then grapes would be in short *supply*. In helping to meet this *demand* the *entrepreneur* would be shifting resources to increase the

supply of grapes to meet the wishes of the PUBLIC as expressed in their price decisions. As long as the *supply* of grapes is relatively short and the price relatively high, he would gain an extra reward in the form of additional profit for shifting into grape production. As the *supply* and *demand* for grapes come into *equilibrium*, the *entrepreneur* would make a normal profit and the resources would be used to everyone's satisfaction.

The extra profit he would make initially would help to offset the loss of the orange trees. He might also find another use for them which would further offset his losses: he might sell them for fire-wood.

If you happened to work for one of the people producing or selling oranges, you would have to find a new job. In our simple example, it might be with the same person or firm, but it would still be a different job. You would have to learn how to handle grapes instead of oranges.

You could do very well as a result of the change. If a number of growers were moving into grape production, as they probably would if prices were high, there might be a shortage of skilled labour in the grape industry, the most important single element of production. In this case, you could sell your time and skill for a good price, or as we usually say, earn a high rate of pay. You too could earn a special reward for seeing the *demand* for increased grape production and moving quickly to help *supply* that *demand*.

You can see that if the *entrepreneur* wants to profit from the workings of the market forces, he has to keep his wits about him, and so does the worker.

In the less extreme case of the *demand* for oranges decreasing, but not stopping entirely, the same kind of shift would occur but it would affect only part of the resources used to produce oranges.

And let us not forget that since the price of grapefruit has now fallen, due to technological change, more people will be willing to buy grapefruit, which will tend to push up its price. Thus more people will be seeking to *supply* extra grapefruit so the grapefruit and the grape producers will be competing for the use of the *factors of production*. The price of each factor, as well as the prices of oranges, grapefruit and grapes, will ultimately come to rest—or be in *equilibrium* when no producer can sell any *factor of production* or product at a better price and no consumer can buy the quantity he wants at a better price.

If the opposite happens, that is, people begin to want many more oranges than they did before, or if grapefruit becomes expensive and people substitute more oranges for fewer grapefruit, the market forces will still swing into action, seeking to establish a new *equilibrium*, shifting resources by the use of the price mechanism.

Each one of us makes many price decisions every day. This is another part of the reason why we all depend on one another for our economic well-being. This is also why the way you spend your money helps to determine how the resources of your country will be used, what kind of jobs will be available, and how much you can earn.

Interdependence becomes even more important when we think of increasing real wealth—making the circle grow bigger or flow faster. You will remember that we supposed, as part of our example, that the price of grapefruit had fallen due to a technological improvement in production. As we discussed, since oranges and grapefruit are fairly good substitutes, people would probably buy more grapefruit and fewer oranges, with the resultant effects. But there is also a limit to how much citrus fruit people want and now they can buy that quantity for less money. Therefore they now have more money to spend on other things. They might decide to spend it buying more meat. The law of *supply and demand* would at once begin seeking a new *equilibrium* position for the quantity supplied and the price of meat. All the effects we have discussed would ray out through the market; but now a new factor would be at work as well.



Ontario is not only Canada's most highly industrialized province, but ranks high in agricultural production.

Since we are considering an increase in real wealth, the circle of flow itself would be expanded as the additional real wealth and the money representing this value join the flows. The extra *demand* for meat would be met either by drawing additional *factors of production* into the economic process, by making the factors already in use more productive, or by combining both these methods.

If the farmer sees that it is profitable to increase production because rising *demand* is leading to rising prices, he might well clear new fields and hire more labour. When his business expands his per-unit costs are likely to fall. The farmer may find for example that the man who previously looked after 100 steers can just as well look after 110. Thus the labour cost per steer is less. He might also discover that if he improves his natural grass by planting a better variety or adding a fertilizer, he can run more head to the acre. Now his land cost per steer is reduced.

Cost reductions of this kind are carried back through the market by law of *supply and demand* until they reach the market price of beef. The farmer who can offer his beef at a lower price because his costs are lower is not incurring a loss by doing so. He is encouraged to reduce his costs because he knows he can sell more at a lower price. Since there is a limit to the amount of meat which can be sold at one time, the farmer knows that the total quantity sold will be what he sells, plus what all his competitors sell. And since the buyer is looking for the best price he can get, he is more likely to buy our farmer's meat. This, in turn, forces other farmers to try to reduce their costs, because if they cannot compete, they will suffer a loss and may eventually be forced out of business.

However, technical improvements often increase capital costs so they will not be introduced unless the farmer knows that the fall in other costs will more than offset this increase. Or the new field which the farmer brought into production may have been previously unused because it was poor land. If the farmer brings this field into production it will run fewer head per acre and increase land per-unit cost—unless the farmer can overcome this problem by technological improvement.

The result in each case will depend on the quality and quantity of resources available, the efficiency with which they are combined, and the extent to which technological improvement can increase production and reduce cost.

Let us assume for the moment that the net result of an increased *demand* for meat, brought about by an increase in real wealth, is a fall in the market price of meat. This is another increase in real wealth. Thus a further expansion of the circle of flow will begin.

This process is implied in the expression 'the rich countries get richer and the poor countries get poorer'. You can now see more clearly why the rich countries get richer. Every increase in real wealth generates a further increase, and these increases tend to get bigger because each one springs from a larger base. They also tend to happen faster because as the *demand* for more goods and services grows, more people see opportunities for increasing personal income by meeting these demands; so people try to be early in the field, to earn that extra reward—additional profit or high wages.

The same thing happens in reverse. If there is a decrease in real wealth, people are able to buy less, there is a fall in *demand*, and less can be sold. Factors go out of production and the circle of flow shrinks. The confidence, fostered by opportunity, which helps man to solve problems, turns into lethargy and things have a tendency to go from bad to worse. And the worse they get, the harder it is to set them to rights.

Of course it is not only in the poor countries that things can go wrong with the economic process. We are one of the richest countries in the world, yet our economic process does not expand with the smooth steady flows we would like. However, now that economists know much more about the economic process, our ability to control these flows is improving. And it is reasonable to expect that as this understanding spreads to more and more people, control will become more efficient.

The economic process is both simple and complex. Any single movement brought about by the law of *supply and demand* is simple. The process becomes complex because the effects of any single movement ray out through the market like ripples in a pond when a pebble is thrown. Many pebbles are always being thrown; the pond is never still and the ripples criss-cross and flow into one another. We must observe very carefully therefore, if we want to find out what is happening in the economic process and why.

In making these observations and building up an understanding of the economic process, it is important to remember that while effect follows cause as surely as night follows day, our actions are the causes. If we wish to improve the effects, then we must improve our actions.

To explain the essence of the law of *supply and demand* we have used simple illustrations from the market place. A highly developed process like ours is more complicated.

The size of the market itself creates problems. The effects of a great many movements are working themselves out at the same time and they can take longer to do so. Pebbles can be thrown which cause ripples large enough to impede other ripples. A big ripple caused by a big producer could be offset by a large number of small ripples caused

by consumers. But consumers do not always bother. Sometimes they just complain instead of acting.

Understandably, the producer tries to influence the consumer to buy *his* goods. As the amount of capital necessary to produce efficiently becomes larger and larger, this becomes more and more important to him. As firms become larger they can afford elaborate advertising campaigns which go beyond providing necessary information: that is, what is available, where it is available, how much it costs, and what its uses are. But you still have your freedom of choice.

The growing size of firms also tends to mean that there are fewer firms selling in a market. In Canada, because the market is fairly small and the size of firm necessary to produce efficiently is quite large, many important industries consist of a small number of large firms. It is difficult to increase competition partly because the high cost of starting up a business makes it hard for new firms to enter the market; and partly because only a small number of firms can operate profitably in a small market. But it would be a mistake to assume that large firms charge higher prices just because they are large. Large firms are often able to produce and distribute more cheaply than small ones. We touched on this in the example of the man who could handle 110 steers just as well as 100, so the per-unit cost of handling each was lower. The government tries to ensure that existing firms do compete with one another and every good businessman knows that, no matter how large his firm, unduly high prices will lose him business in the long run.

In a complex industrial society it is not possible for all consumers to check all prices, as could have happened in our simple market model. But many consumers do not bother to check as much as they could. They may be too tired or too busy. These are good enough reasons. But there are no free goods. If you want convenience, you have to pay for it. This also applies to buying goods in expensive packages or goods like prepared foods with a built-in service. They cost more to produce. As long as you continue buying them you are telling the producer that this is what you want—so you cannot blame him if he goes on producing them.

We must always assemble all the relevant facts and carefully examine the connections between them before jumping to conclusions about what is happening and why. A better knowledge of connections in the economic process will help you to make better economic decisions. If you find out what skills are in *demand* and train for them, and always watch for a change in *demand* for skills and retrain, you can always earn a good living. If you do your job efficiently, you keep the cost of production down. This makes you a valuable employee and gives you a better chance of earning more money. A better knowledge of

these connections also helps you as a consumer. If you spend your money wisely, making sure you buy what you really want (instead of just following the crowd) and always look for the best price, you will get the best value for your money.

The sum of all these individual economic decisions governs the flow of the whole economic process. The individual who acts rationally makes the best of his own economic situation. All individuals acting rationally makes the best of the whole economic process. When the economic process is at its best, the individual benefits.

Elasticity of Demand

The way in which *supply and demand* works is called a "law" because it always changes prices in the same way. If the price of a good or service rises, less of it is bought, while if it falls, more of it is bought. If the price of a good or service rises, more of it is supplied, while if it falls, less of it is supplied. But this does not tell us how much more or how much less is bought or supplied. "How much" depends on the stretch or *elasticity* of the market.

Each good and service has its own *elasticity*, and the *elasticity* of each good and service is different for different price ranges. For example, the *elasticity of demand* for bread is different from the *elasticity of demand* for shoes. And the *elasticity of demand* for bread when the price of bread ranges from 20 cents to 25 cents, is different from the *elasticity of demand* for bread when the price ranges from 26 cents to 30 cents.

In order to understand the meaning of *elasticity*, let us consider two extreme cases which never happen in real life. If there were a good or service which had *perfect elasticity of demand* this would mean that if the price of that good rose just the least bit, even a fraction of a cent, that good would not be bought at all. If there were a good or service which had *perfect inelasticity of demand*, which is exactly the opposite from *perfect elasticity of demand*, this would mean that no matter how much the price of that good or service rose, exactly the same quantity would still be bought.

In real life, the demand for a good or a service is either *relatively elastic*, *relatively inelastic*, or that good has *unitary elasticity of demand*.

If the *demand* for a good or service is *relatively elastic*, then if the price of that good rises just a little the quantity bought will fall quite a lot. The reverse is also true. If the price falls just a little, a lot more of the good will be bought. The market for this good or service has a

lot of "stretch" in it. On the other hand, if the *demand* for a good or service is *relatively inelastic*, then if the price rises just a little the quantity bought will also fall just a little. The reverse is also true. If the price falls just a little then just a little more of it will be bought. There is not much "stretch" in the market for this good.

How much money can be made from selling is the number of things sold, times the price; i.e., if I can sell 20 things at \$1.00 each, I can make \$20.00. This is very important.

If the *demand* for a good or service is *relatively elastic*, any price increase will result in so large a drop in sales that the seller will make less money. For example, suppose a seller had priced his good or service at \$1.00, was selling 100 each day, and making \$100 a day. Now let us suppose that he raises his price to \$1.05 and finds that as a result he is selling only 80 every day. Now he is making \$84.00 a day. There is not much encouragement here to raise the price.

But if the *demand* for a good or service is *relatively inelastic*, the seller could be better off even with a slight drop in sales. For example, suppose this seller had also priced his good or service at \$1.00, was selling 100 a day, and making \$100 a day. But now let us suppose that he raises his price to \$1.05 but finds that his sales only drop to 97 a day. Now he is making \$101.75 a day.

It can also happen that an increase in price and a drop in sales will leave the seller in the same position as before. For example, a seller who was selling 5 articles a day at \$4.00 each would be making \$20.00. If he raised the price to \$5.00 and then sold only 4 articles a day, he would still be making \$20.00. This is called *unitary elasticity of demand*.

We must be very clear that charging more for an article because it is of better quality has nothing to do with the idea of *elasticity of demand*. For example, two clocks of different quality may be offered for sale, one at \$8 and one at \$10. If more people choose to buy the \$10 clock because it is of better quality, this does not mean that the *demand* for the \$10 clock is *relatively inelastic*. But, if the price of the \$8 clock is raised to \$10 and approximately the same number of people continue to buy it, the *demand* for this clock is *relatively inelastic*.

But *relative inelasticity of demand* may also indicate that buyers do not feel strongly enough about a change in price to let their views be known in the most effective way—by a noticeable drop in sales. The demand for alcohol and cigarettes, for example, is *relatively inelastic*.

Most buyers grumble when a price goes up, but it is the *elasticity of demand* which indicates what they are doing about it. Prices are not like the weather—something we can only complain about but not do anything about. Man makes prices. They are his decisions about how much buying power a good or service is worth to him.

Elasticity of Supply

Elasticity of supply indicates how far the supplier can respond to changes in price, and this, in turn, depends on his costs.

It corresponds to *elasticity of demand*. If the *supply* of a good is *relatively elastic*, then if the price rises just a little, the quantity supplied will increase quite a lot. But if the price falls just a little, the quantity supplied will fall quite a lot.

If the *supply* of a good is *relatively inelastic*, then if the price rises just a little, the quantity supplied will also increase just a little. And if the price falls just a little, the quantity supplied will also fall just a little.

If the *supply* of a good is *relatively elastic*, this indicates that the factors necessary to produce it are still fairly easy to obtain at a good price; but if the supply is *relatively inelastic*, then the opposite is the case.

Another way to look at this is to remember that the producer or seller is also a buyer. If the seller is not also a producer, he must first buy the good before he can sell it to you. The producer must first buy the *factors of production* before he can make the good. Neither can sell to you below cost and stay in business. Each is entitled to a fair profit. So neither will bid up prices in the factor market unless he knows that he can still cover his costs and make a profit when he sells to the final consumer. And this he cannot do unless the final consumer is willing to pay the price.

It is the consumer's right to pay a high price to get something he wants. Everyone must decide for himself what mixture of goods and services to buy with his income and how much to save. Everyone knows that if he buys some expensive things he must do without other things or save less.

But buying what you want carefully and buying what you want carelessly are two different things. If the consumer buys carelessly, he is saying to the producer: "Don't charge costs plus a reasonable profit. Charge what the market will bear."

It is worth remembering that our system of producing wealth is organized on the principle that producers and sellers are out to make as much profit as they can. The fact that our system has produced wealth, the like of which mankind has never seen before, is a high recommendation for it. But helping to keep the buying power in money is the responsibility of every individual member of society.

The Business Sector in Ontario

In this section we shall look briefly at the kinds of goods and services which are produced by the BUSINESS SECTOR in Ontario. Ontario has long had an advantage in manufacturing because of its good mix of natural resources and convenient location. Today, more than one half of the value of Canadian manufacturing is produced in Ontario. This includes most of Canada's iron and steel, transportation equipment and industrial machinery. It also includes about 60 per cent of Canada's production of primary metals, metal fabricating and chemicals, about 70 per cent of miscellaneous manufactures and a little less than half of food and beverages production.

In all, the secondary industries, manufacturing and construction, account for about 70 per cent of Ontario's commodity production. The remaining 30 per cent comes from the primary industries, of which the most important are agriculture, mining, electric power, and forestry. Ontario's primary industries have become increasingly efficient and they have been able to produce increasing quantities using less labour. This has helped strengthen Ontario's advantage in manufacturing.

Now the secondary industries are becoming more efficient and freeing more and more people for the tertiary or service industries such as transportation, trade, recreation and personal services, finance, insurance, real estate, administration, education, and health. We cannot quote figures in quite the same way for the tertiary as we can for the primary and secondary industries because we have not yet found a satisfactory way to measure the value of services produced, but we can see what is happening by looking at employment figures. In 1951, 42 per cent of Ontario's labour force worked in the secondary industries and 42 per cent in the tertiary industries. By 1961, 36 per cent worked in secondary industries and 52 per cent in the tertiary. This was a gain of 10 per cent for the service industries. By 1970, we expect that about 34 per cent of our labour force will work in secondary industry and 57 per cent in the service sector. In other words, we expect that the *demand* for services will continue to increase faster than the *demand* for goods. It is not likely that the number of people employed in manufacturing and construction will be reduced, but as the size of the population and the *labour force* increases, the majority of new jobs will exist in the service sector.

This raises a problem of *productivity*. *Productivity* is how much we can produce per man-unit of time, e.g., per man-hour or per man-year. As we have seen, the more we can produce, the more wealth we have, so we are anxious to raise *productivity* as high as possible. The reason

for the problem in the service sector is quite simple. A man working with a machine can produce more than a man not working with a machine and so far we have been unable to use machines to produce services to nearly the same extent as we can to produce goods.

One reason services tend to be expensive is because it costs a lot of time and skill to produce them. Another reason is that the *demand* for services is increasing as income levels rise. Once people have a fair stock of goods they become more interested in travelling, going to the hairdresser, eating in a restaurant. As *supply* catches up with *demand*, price will fall. You can see this happening in the case of air fares, for example, now that there are many more flights and larger planes to carry more people.

Opportunities to make extra profits by improving *productivity* in the service industries are extensive.



Ontario produces most of the motor vehicles manufactured in Canada.

3/How money is created

When we first looked at Diagram I, representing the basic circular flow of the economic process, we saw that the inner circle of real wealth was accompanied by an outer circle of money, which made faster and more efficient the flow of real wealth. We then saw that the flow of money is really a continuous flow of price decisions. These prices govern the way in which our economic process functions. Prices are also a means of voting on how the resources of our country will be allocated.

But money itself is not value. It merely represents value; it stores value and is a way of exchanging value. For this reason, anything which a whole society will agree to accept as money can be used as money. For settling some international trading accounts, the Canadian government uses gold, but inside Canada, money is currency and bank balances. Currency is paper bills of various denominations, \$1, \$2, \$5, \$10 and larger, and coins, 1c, 5c, 10c, 25c, 50c and occasionally, silver dollars. Currency forms about 12 per cent of our money supply. Bank balances—figures in a book—comprise the remainder and by far the largest part of our money supply.

Historical Background

This state of affairs came about slowly as men gradually discovered it was both safe and efficient.

In the early days of capitalism, gold was used almost exclusively as money. This had certain disadvantages. Gold was heavy. With constant use, a soft gold coin or a gold bar tended to wear away.

Perhaps the biggest disadvantage was the cost of guarding gold. Traders spent a good deal of time travelling. Because it was commonly known that traders carried gold, they were forced to travel well armed and to hire guards to travel with them.

As Western Europe emerged from the Dark Ages, traders began to find a solution to this problem. Trading fairs were then held at the main crossroads in France and the Lowlands. At these fairs were goldsmiths. Completely honest men who had the trust of all the traders,

these goldsmiths had good strong vaults in which to keep their gold. Traders soon took advantage of this situation; they began to leave their gold for safekeeping with a goldsmith. In return, they received from the goldsmith a signed piece of paper stating that he would pay out the gold on demand.

Now when the traders settled their accounts at a particular fair, they no longer needed to exchange gold. They simply asked the goldsmith to issue new pieces of paper showing the amount of gold each trader now held on deposit.

After that, when traders travelled to new fairs they needed to carry little gold. The goldsmiths at the various fairs were known to one another and were willing to provide the traders with letters of credit.

From experience goldsmiths learned that a trader seldom asked for more than a small percentage of his gold. Most of his accounts could be settled by book-keeping entries and the trader needed to carry only small amounts of spending money in gold. Goldsmiths soon realized that, with proper safeguards, they could lend the remaining gold to other traders and charge interest on the loans.

To understand the principle involved, let us consider a simple example. Suppose that one trader had on deposit with a goldsmith, gold to the value of \$100; and that he never asked for more than \$10 worth of his gold. Therefore the goldsmith was always holding at least \$90 worth of gold on this particular trader's behalf.

This \$90 worth of gold the goldsmith then lent to another trader. Naturally, the goldsmith assured himself that the trader to whom he lent the gold was a solid merchant who would be able to repay the loan. In any case, he did not actually make the loan in the form of gold. Rather, the goldsmith gave a signed piece of paper to the borrowing trader stating that he would pay on demand gold to the value of \$90.

The trader to whom this first loan was made also settled most of his accounts by book-keeping entries; and he never asked for more than 10 per cent of his loan in the form of gold. Therefore the goldsmith was still holding at least \$81 worth of gold.

This \$81 worth of gold, the goldsmith then lent to a second borrower, again using a signed piece of paper stating that he would pay on demand, to this second borrower, gold to the value of \$81.

The second borrower never asked for more than 10 per cent of his loan in the form of gold, so the goldsmith used the remaining \$72.90 worth of gold to make a third loan, and so on.

Assuming that no trader who borrowed from his would ever ask for more than 10 per cent of his loan in the form of gold, the goldsmith

realized that he could make loans to the value of \$1,000 worth of gold against the initial deposit of \$100 worth of gold.

To the extent of \$900 worth of gold, the traders were now using credit as money. The goldsmiths who had created this credit were the modern world's first "bankers".

Understandably, it was a long time before men realized that banks create money. When these bankers made loans, they made them against good security. They assured themselves that borrowers would have goods worth more than the amount of the loan, and never loaned as much as they estimated these goods to be worth to allow for a drop in market value if the goods had to be sold quickly to repay the loan.

And, of course, bankers had assets of their own which could be used to meet customers' demands for cash if these exceeded the amount of money bankers normally held in this form.

Nor was it understood that the balances outstanding in the banker's books, either deposits or loans, were money. People thought that only the gold was money. The root of the trouble was that the nature and function of money was not understood. Gold had signified wealth for so long that people were unable to accept the fact that they could neither eat it, wear it (except for ornamentation), nor shelter under it.

You might like to pursue this interesting topic by reading the story of the fall of Spain, after it made the tragic mistake of supposing that the gold, and later the silver, which poured into its coffers from the New World, was wealth.

Creating Money in Modern Canada

In Canada, as in most western countries, the amount of money which the chartered banks must hold in reserve so that you can go to the bank at any time and withdraw your money, is set by law. This amount, therefore, is called the Statutory Reserve. It is a percentage of the total amount of deposit liabilities outstanding against a bank at any one time, i.e., a percentage of the total amount of deposits which it holds and loans which it has made. Deposit liabilities are so called because the bank is liable to pay out money from these deposits. Loans are treated in the same way as deposits because, if you have a loan from a bank, you can draw money from your account, to which the loan is credited, in exactly the same way as you could if you had deposited the money. Most deposit liabilities are loans.

Under the Bank Act of 1967, the Statutory Reserve is 12 per cent of demand deposits (that is, ordinary bank account deposits from which you can withdraw money at any time) and 4 per cent of notice

deposits. Notice deposits refer to a particular kind of bank account. If you have such an account, you agree to give the bank a certain number of days' notice before withdrawing money from it. Due to the ratio of demand to notice deposits in most banks, the Statutory Reserve will average about 6.3 per cent. This Statutory Reserve is sometimes called the primary reserve. The banks hold an additional 7 per cent of their deposit liabilities as a secondary reserve. Until the Bank Act of 1967, the banks held this secondary reserve voluntarily, but it too is now a Statutory Reserve.

The Bank Act, under which the chartered banks are authorized to carry on their business, also sets the maximum interest rate the banks may charge for loans, the kinds of security they may accept against loans, and the ways in which they may hold assets. In general, it ensures sound banking practice under the law.

Canadians can be justly proud of their banking system. It is safe, efficient, and enjoys a high world reputation.

Since the total of the average of primary plus secondary Statutory Reserve is about 13.5 per cent, the chartered banks can make loans or create money to the extent of about 7.4 times the amount of the Statutory Reserve.

A portion of this Statutory Reserve is held in the branches of the chartered banks. This is the currency you see in the teller's drawer when you go to cash a cheque. Additional currency is usually kept in branch vaults. But the chartered banks hold most of the Statutory Reserve on deposit with the Bank of Canada.

The Bank of Canada is the nation's central bank. It is sometimes called the bankers' bank because one of the main reasons for its existence is to provide a bank which holds on deposit most of the Statutory Reserve of the chartered banks. The chartered banks can also borrow from the Bank of Canada.

The Bank of Canada is owned by the federal government and, in accordance with the Bank of Canada Act, it functions as an agent of the federal government. This is the other main reason for its existence. In its capacity as agent of the federal government, the Bank of Canada arranges for the sale of government bonds and Treasury Bills. (Treasury Bills are another way in which the government borrows money.) The Bank of Canada often buys large quantities of government bonds and Treasury Bills. These it may later re-sell. It can also lend money to certain large financial firms which help to market Treasury Bills. The Bank of Canada buys and sells gold for the federal government; and, on behalf of the federal government, trades Canadian currency in the

foreign exchange market. Inside Canada it controls the country's money supply.

Controlling the Money Supply in Canada

Since we use money to keep the economic process lubricated, as it were, it is important that the amount of money in circulation at any given time should be sufficient to finance the exchange of goods and services which have already been produced, as well as those which are now being produced. This is a difficult task. If you think for a moment of all the many changes in *supply* and *demand* which are occurring at the same time in the BUSINESS SECTOR, with all their effects raying out through the market as the constant flow of price decisions does its work governing how much and what will be produced, you will understand that the Bank of Canada's computers are kept busy trying to calculate how much money is necessary at any given time to make these decisions effective.

In addition to making these calculations, the Bank of Canada must also take account of how fast money is changing hands at any particular time. For example, if a dollar bill changes hands four times in a day, that dollar bill will serve the same purpose as four dollar bills which change hands only once in that day. The rate at which money changes hands is called the *velocity of money*.

A further complication is that the Bank of Canada must take account of what is called the *time lag*. It takes a certain amount of time for action by the Bank of Canada to affect the money supply. The Bank of Canada must estimate the probable length of the *time lag*, and what other changes in the amount of money required are likely to occur during the *time lag*. Then it must calculate by how much it wishes to change the money supply at the future time when its action will have that effect.

Estimating the *time lag* and the changes which may occur during it can be more difficult when the Bank of Canada wishes to increase rather than decrease the money supply. The law says that a bank's Statutory Reserve may not fall below a certain percentage of its deposit liabilities. Therefore, a chartered bank must move quickly to reduce its deposit liabilities if the Bank of Canada reduces the Statutory Reserve. But the law does not say that the statutory reserve may not rise above 13.5 per cent; and a chartered bank is not compelled to increase its deposit liabilities if the Bank of Canada increases the Statutory Reserve. A bank will probably wish to do so because the

more business it does the more money it will earn, but a bank cannot lend money unless reliable borrowers are at hand.

How the Bank of Canada Controls the Money Supply

There are a number of ways in which the Bank of Canada may control the money supply. Generally, it buys and sells government bonds on the open market. This method is called *open market operations*. It works like this.

The Bank of Canada cannot sell a government bond unless someone buys it and pays for it. A buyer pays for his bond by drawing a cheque against his bank account. A cheque is an instruction to a bank to pay out money against the account of the person signing the cheque. If you look at a cheque form you will see that it says "Pay to the order of . . .". The cheque in this example is an instruction to the bank to take money out of the account of the person buying the bond and pay it to the Bank of Canada. To follow this instruction, the bank must draw money out of its account with the Bank of Canada. This account is the bank's Statutory Reserve. When the bank draws against it, the Statutory Reserve is reduced. Since the law states that the Statutory Reserve must be a certain percentage of the bank's deposit liabilities, those deposit liabilities must be reduced whenever the Statutory Reserve is reduced. When a bank's deposit liabilities are reduced, the money supply of the country is also reduced.

If the Bank of Canada buys a government bond, someone must sell it and the Bank of Canada must pay for it. The Bank of Canada does this by sending a cheque to the person selling the bond. This person deposits the cheque in his bank account. But the cheque is really an instruction by the Bank of Canada to itself to pay out money to the person who sold the bond. The Bank of Canada does this by paying the money into the deposit account of the chartered bank in which the seller of the bond has his bank account. This deposit account with the Bank of Canada is the bank's Statutory Reserve. When money is paid into it, the Statutory Reserve is increased, and the bank's deposit liabilities can then also be increased. When a bank's deposit liabilities are increased, the money supply of the country is also increased.

When the Bank of Canada performs *open market operations*, it is not concerned with altering the Statutory Reserve of any particular bank. Indeed, it could not do this, since it does not know who will buy the bond or in which bank the buyer will have his account. It is concerned solely with altering the total Statutory Reserve of the banking system. How any particular bank will be affected by the Bank of

Canada's actions to control the money supply depends on the size of the bank in relation to the banking system, and on the volume of business done by that bank.

Money and Credit

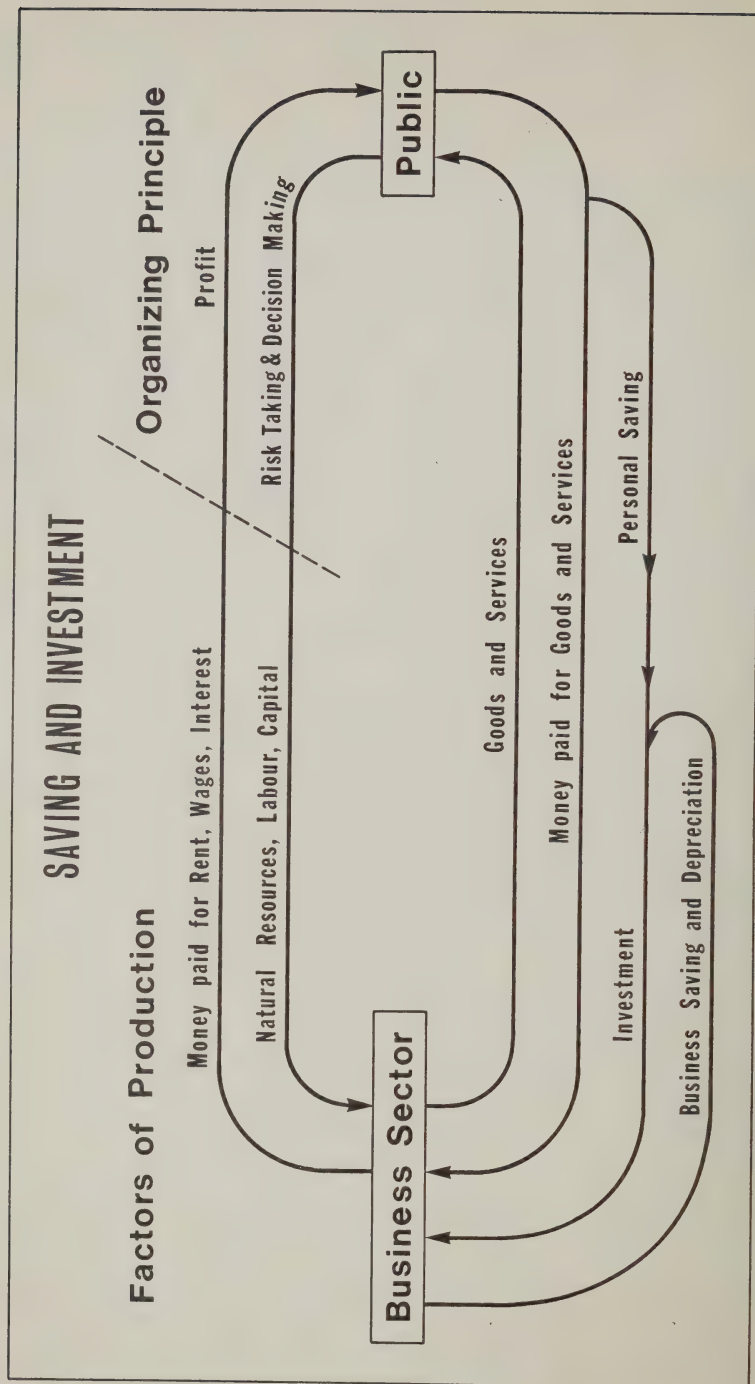
Since most deposit liabilities are loans, much of the country's money supply is credit. That is why the Bank of Canada is able to control the money supply by altering the Statutory Reserve. When a chartered bank makes a loan, the money supply is increased; when a chartered bank calls in a loan, the money supply is reduced.

All loans are credit, but not all loans affect the money supply. If you borrow money from another person, you have received credit, but the money supply is not affected. The money existed before you borrowed it. The person who lent it could have used it himself. The same thing is true if you borrow money from a firm, or if one firm borrows money from another firm.

Extending credit increases the money supply only if the loan is made in such a way that the borrower can use money which did not exist before the loan was made.

It is possible for the banks to create money for the same reasons that made it possible for early traders to settle their accounts using signed notes from goldsmiths. The whole society agrees to accept bank accounts as money because everyone has confidence that the banks will not extend loans greater than the value of the real wealth they represent; and that the banks have sufficient experience to know how much money, in the form of currency, is likely to be demanded at any one time.

DIAGRAM 2



4/The costs of production

In addition to showing the basic circular flows of the economic process, this diagram represents the flows of money which allow for *depreciation* and make possible *saving* and *investment*.

Depreciation

One of the costs you must take into account when you buy a car is *depreciation*. The car wears out. Its market value falls because newer and better models are available. Because you are a consumer, in economics, we lump this kind of depreciation under the heading, *consumption*. The car is eventually used up or consumed. We do this for the sake of clarity so that we can keep the word *depreciation* to describe what happens to capital equipment in the BUSINESS SECTOR.



Ontario accounts for approximately one quarter of Canada's mineral output.

Depreciation is one of the costs of production. Plant and equipment wears out. It becomes obsolete due to technological change or it loses value because of a change in *demand*. You remember the orange trees which fell victim to a change in taste?

The businessman allows for *depreciation* by “writing down” on his balance sheet the value of his real assets. This allows him to budget for replacement. If, for example, he buys a machine he expects will be useful for 10 years, he could consider that the value of that machine depreciates by one tenth in each of the 10 years. He would therefore show a charge of one tenth of the machine’s cost as part of his annual expenses, even though the machine was paid for when he bought it. This process of “writing down” or *depreciation* allows him to budget funds for replacing plant and equipment.

The economist too must allow for *depreciation*. The National Accounts, the country’s “balance sheet” show that some of the wealth produced does not reach the PUBLIC in the form of goods and services. It is wealth used up in the production of wealth—*depreciation*.

Saving

There is another cost of production as well—a cost of future production. We call it *saving*. Business saves in the form of undistributed profits. It does this so that it will have at its disposal money for capital expansion—money to buy extra plant, equipment and machinery.

Individuals save too. The sensible person does not spend every penny he earns. And since it is not possible to spend and save the same money at the same time, these savings do not flow from the PUBLIC to the BUSINESS SECTOR in the form of money spent buying goods and services. On the diagram, therefore, they are shown flowing down from the line representing money spent buying goods and services.

Neither do undistributed profits flow from the BUSINESS SECTOR back to the PUBLIC; so they are shown flowing out from the BUSINESS SECTOR and then back to the BUSINESS SECTOR as *investment*.

The money cost of *depreciation* is shown on the same line as business saving because this money behaves in the same way as business saving.

Investment

Some of the money individuals save is used to buy stocks or bonds. Some of it is deposited in banks or other financial institutions. These

financial institutions may then use it to buy stocks or bonds. The sale of stocks and bonds provides the BUSINESS SECTOR with money to buy plant, equipment and machinery, and to produce goods ready for sale which it holds on inventory. This process of returning to the BUSINESS SECTOR money which has been saved is called *investment*. When the BUSINESS SECTOR uses its own savings to buy new real capital, or finance inventories, this too, is *investment*.

We do not need to show flows of real wealth corresponding to the money flows necessary for *saving* and *investment*. New *investment* brings additional *factors of production* into the economic process. On the basic diagram, we have already shown the *factors of production* flowing into the BUSINESS SECTOR. New *investment* simply increases the size of this flow. It does this in several ways.

It increases the size of the flow of real capital. Since real capital must also be produced before it exists, additional natural resources and labour must flow into the BUSINESS SECTOR to produce it.

When the flow of real capital is increased, the stock of real capital in the BUSINESS SECTOR is also increased: that is, the BUSINESS SECTOR has available more plant, equipment and machinery for production. When the BUSINESS SECTOR has a larger stock of real capital, it can employ more natural resources and more labour to produce more goods and services. In addition, a larger capital stock improves productivity, i.e., a larger volume of goods or services can be produced per man-hour.

New *investment* is one of the important ways in which we increase our real wealth.

Real Saving and Investment and Money Saving and Investment

To save and invest we use money. The process of *saving* and *investment* further emphasizes how useful money is. We must keep very clearly in mind, however, that money saved and invested is only useful because it represents buying power.

On the diagram the flows of money are shown separately from the flows of real wealth, but this is only an approximation. It would be better if it were possible to show the flows of money as an intricate mechanism for carrying the flows of real wealth.

Saving in the form of money has several advantages. It would be difficult for individuals to save in the form of goods. Only a few goods, land and jewels, for example, would be useful for this purpose. These are usually expensive so the problem of saving smaller amounts would remain. A firm producing shoes, for example, would find it useless to

save a portion of its shoe production in order to produce extra shoes. But when individuals and firms save in the form of money what they are really saving is buying power. The individual can readily exchange this buying power for the object of his savings, say, a new house; and the firm can readily exchange it for the kind of new capital equipment it needs.

Another advantage of *saving* in the form of money is that savings of many people and firms can be easily gathered together. If a firm wishes to use more money for *investment* than it has saved, it can do this in one of two ways. It can borrow the money or it can issue new shares.

Besides borrowing from a bank, a firm can borrow money by "floating a bond issue", that is, by selling bonds in the money market. The total bond issue may be very large, but it can be made up of a number of smaller contributions. For example, a bond issue of \$1,000,000 may represent the gathering together of relatively small amounts of savings in the form of \$100 or \$1,000 bonds. By itself \$100 worth of savings or even \$1,000 is not likely to buy a useful amount of real capital. Used to buy a bond it becomes a valuable addition to a collection of savings large enough to buy a substantial amount of new productive equipment. The person buying the bond gains too; he earns interest on his money thereby increasing his income.

When you buy a bond, you are lending money to a firm: but when you buy shares you are purchasing part ownership of the firm. A firm can also collect a meaningful pool of savings by issuing new shares.

Money income earned by shares is called dividends. Dividends are the profits distributed by a firm to its shareholders and they are paid on a per share basis. For example, if a company distributed a 5¢ dividend for each \$1 share and you owned \$100 worth of shares, then you would receive \$5 in dividends. If in addition to distributing profits the firm also retains a portion of its earnings (undistributed profits), then besides receiving a dividend, the value of your shares would probably increase.

People sometimes find the difference between bonds and shares confusing because both can be traded on the stock exchange, both are subject there to the law of *supply and demand*, and both can fluctuate in price.

If, today, people want to buy more of a certain company's bonds or shares than are being offered for sale, then the market price of those bonds or shares will rise. But if many more people want to sell that company's bonds or shares (i.e., want to *supply* them to the market) than there are people willing to buy them, then the price of those bonds or shares will fall.

This is why the market value of a bond is not always the same as its face value. (Shares do not always have a face value.) If you buy a \$100 bond it will have written on it "\$100." That is its face value. But the price you will pay to buy it depends on whether *supply* or *demand* in the market is greater at the time you make the purchase. If *supply* is greater, i.e., if more people want to sell than to buy, it will cost you less than \$100; but if *demand* is greater, i.e., if more people want to buy than to sell, it will cost you more than \$100.

If you sell a bond or a share for more than you paid for it, you are said to be making a capital gain.

The fact that there can be a difference between the face value and the market value of a bond explains why the real rate of interest on a bond can change. Let us suppose, for example, that for \$100 you buy a bond with a face value of \$100. Buying a bond at its face value is called *buying at par*. In addition to its face value, the bond will also have written on it the dollar amount of interest which that bond will earn. Let us say it is \$5 a year. If a \$100 bond will earn \$5 interest then the rate of interest is 5 per cent. Now let us suppose that in the course of market trading, the market price of the bond falls to \$95. No longer is it earning \$5 on \$100; it is now earning \$5 on \$95. There-



Ontario's banking system enjoys a world reputation.

fore the real rate of interest is greater than 5 per cent. If, instead, the market value of the bond goes up to, say, \$105, then your \$5 interest is being earned on \$105, and therefore the real rate of interest is less than 5 per cent.

The rate of interest is the price of money and varies according to the *demand* for money. If firms want to borrow more money than there is money available to borrow, the rate of interest will rise. A firm wishing to float a new bond issue in these circumstances might find that, to attract buyers for its bonds, it had to write on the face of them that it would pay, say \$6 interest. Some people holding bonds paying \$5 interest would want to sell them so that they could use the money to buy the new bonds paying \$6 interest. This would increase the market *supply* of the bonds paying \$5 interest, and force down the market price of these bonds.

Interest rates often rise at a time when firms are optimistic about how much profit they can make so the price of shares is likely to rise as well. Some people who hold bonds paying \$5 interest will want to sell them so they can use the money to buy shares. This too, will help increase the market *supply* of the bonds paying \$5 interest and thus strengthen the tendency for the price of these bonds to fall. Because the price of bonds moves up while the interest rate moves down and vice versa, the price of bonds and the interest rate are said to *vary inversely*.

Changing market prices of bonds and shares serve a useful economic purpose. Firms floating new issues of bonds or shares are in effect competing for the use of money to buy the *factors of production* necessary to produce goods and services. Individuals or firms interested in buying bonds or shares will be attracted by the highest rate of return. If a firm is to offer a high rate of return, then it must produce goods and services which the public wants to buy, and it must produce them efficiently keeping costs to a minimum. Since the money being used to buy bonds and shares tends to flow to firms meeting these requirements, resources tend to be allocated to efficient firms producing goods and services in *demand*.

In this way the money market forms a connecting link between the final *demand* for goods and services and their production. When the *entrepreneur* studies the market for goods and makes his decision about what and how much to produce, he may find that his undistributed profits are not large enough to carry out his production plans. He must therefore go to the money market to acquire additional buying power, because without buying power he cannot purchase the *factors of production* necessary to make his production decisions effective. In the money market, the *entrepreneur's* decision about what

to produce, as well as his ability to produce efficiently, is, as it were, double checked.

The money market is an intricate mechanism. Many firms exist for the purpose of trading in money. Banks, stock-brokers, trust companies and mutual funds are among these. Some of these institutions collect pools of savings made up of quite small amounts. Banks and trust companies do this when they invite members of the public to open savings accounts at a stated rate of interest. In turn they lend these pools of savings out again at a higher rate of interest. A firm acting in this way is called a *financial intermediary*, and performs a most useful function.

People with savings accounts may not have enough money at any given time to buy bonds or stock directly (stock is another name for shares); they may want to keep their savings in such a way that they can spend them at any time if they have to; or both. A savings account makes it possible both to earn interest on spare cash and to have ready access to that cash if necessary. A *financial intermediary*, having collected relatively small amounts into a large pool of savings, has sufficient money to lend to *entrepreneurs*, ensuring that the savings flow back to the BUSINESS SECTOR where they can be invested.

The difference between the rate of interest which the *financial intermediary* pays to the holders of savings accounts and the rate of interest he charges on loans to *entrepreneurs* is its gross profit. Naturally it has business expenses which must be deducted from this.

The intermediary's position is a little different from that of the *entrepreneur* in the goods market. The *financial intermediary* is producing and selling a flow of services. In doing so, he is also buying and selling the use of money. To do this successfully, he must be able to judge whether the *entrepreneur's* production decisions are correct.

When a mutual fund uses the contributions of its members to buy shares, it too, is acting as a *financial intermediary*. A mutual fund is a company which exists for the purpose of buying and selling the bonds and stock of other companies. Instead of buying the bonds or stock of firms producing goods and services, some people prefer to buy into a mutual fund. They do this because the directors of a mutual fund may have a better knowledge of the market than small investors; and by buying mutual funds, the small investor can spread his risks instead of using all his savings to buy the bonds or stock of one company.

Besides the variety of firms and methods for collecting savings, there are also many methods of lending money. These methods use pieces of paper on which are written the amount of the loan, the rate of interest, the date and often the time of repayment and any other

special terms or conditions. Such pieces of paper have a variety of names, according to the length of the loan, the method of repayment, and so on. They are commonly called "financial paper," or sometimes just "paper."

Financial paper may change hands more than once before it leaves the money market and returns to the goods market where its buying power was originally created. Although this trading serves a useful purpose, it also contains hazards.

On the positive side traders in the money market can, as it were, use their buying and selling decisions to discuss among themselves whether or not the *entrepreneur's* production decisions are correct. An investment which at first seemed attractive may, after a little mulling over by the money market, seem less so, or vice versa. An investment which yesterday was really attractive may tomorrow be superseded by a better one.

Changes in outside conditions which may affect the *entrepreneur's* ability to produce efficiently—a war, a strike, a change in government policy—can be assessed very quickly in the money market; and more or less buying power can be placed in the hands of different *entrepreneurs* according to the market's judgment about whether they will be helped or hindered by these changes. Although it may appear at first sight that the flows of real wealth are being held up if money lodges for a time in the money market instead of flowing straight through it, this need not be so. It can prove much faster to verify a shift in the use of resources in the money market than in the goods market.

One hazard, however, is that persons trading in the money market do not always confine themselves to judging the correctness of the *entrepreneur's* production decisions. Some traders speculate on what other money traders will do. When this happens, the money market is not double checking the *entrepreneur's* production decisions, and the flow of money is not directing the flow of real wealth as efficiently as it should.

Another hazard is that the money market often makes erratic decisions about the probable effects of changes in outside conditions. It is an interesting habit to glance at the stock market pages in your daily newspaper and note what is happening to prices in the money market in conjunction with the world situation. You will quickly realize that the market is very sensitive to changes in outside conditions, but just why "hard-headed" businessmen should react as they do to particular news items is sometimes difficult to understand. For example, stock prices tumbled when President Eisenhower had an operation.

Trading in the money market is sometimes called financial investment. But not always. Sometimes it is just called investment. This is using the same kind of verbal shorthand or accounting terminology as calling money, capital. It is quite all right to do this, as long as you remember that real *investment* is putting the *factors of production* to work to produce goods and services. Using money is just a method of doing this.

Calling financial investment, investment, may be one additional reason why there are hazards to trading in the money market. Habit is a powerful thing; and people who continually speak about *investment*, when they really mean financial investment, may come to feel after a time that the two are the same. From here, it is not a very big step into the error of confusing money with value and supposing that if money increases, value will also increase.

The money market is a fascinating place. Watching its fluid movements is like watching quicksilver. In the money market we often see capitalism working at its best—men of judgment working with quick, sure skill, using the subtle and powerful instrument of money to shift resources into their most efficient use. But the money market has also shown us capitalism at its worst. It is less than forty years since the great crash of 1929. In the first part of that year, the market price of some stocks rose 1,100 per cent in eleven months. It seems incredible that anyone could suppose value could increase at such a rate. But people did, or else they supposed that money was value. You know what happened.

Saving and Investment

Within the domestic circle of flow, *saving* by definition is always equal to *investment*; but intentions to invest do not always equal intentions to save.

Money can be used to buy goods and services, or it can be saved. Only money which has been saved in one of the ways we have discussed (and not hidden under the mattress or kept in an old sock) is available for *investment*.

If intentions to invest are greater than intentions to save, some of the firms who want to invest will be disappointed. When the *demand* for money available for *investment* is greater than the *supply* of money available for *investment*, the price of money (the interest rate) will rise, because people who supply money for *investment* know that some of the firms wanting to invest will pay higher interest rates to

make sure they get any available funds. The rationing effect of price will be doing its job.

At the same time, because the interest rate is rising, some people may decide to save more money so that they can make it available for *investment* and so increase their incomes. This will raise the level of *saving* a little closer to the level of intentions to invest.

If intentions to invest are less than intentions to save, the situation is a little different. If less money is used for *investment*, then fewer *factors of production* are drawn into the circle of flow. Therefore people selling the *factors of production* earn less income. When less income is earned, less can be saved, so the level of *saving* will fall until it is equal to the level of *investment*.

This situation can change to the extent that foreign *investment* takes place. Some of the money Canadians save is invested abroad. On the other hand, foreigners invest some of the money they have saved in Canada. Currently more money is being invested in Canada than is being saved in Canada.

If intentions to invest do not equal intentions to save, governments can help to bring about a balance. If intentions to invest are known to be less than intentions to save, a government may decide to invest the difference to prevent the fall in income and saving that would otherwise occur. To some extent, the governments of most western countries now act in this way.

Another action most western governments take in these circumstances is to loosen the money supply. This increases the ability of the chartered banks to lend money and tends to lower the interest rates. Lower interest rates should make the idea of investing more attractive and so help bring intentions to invest closer to intentions to save. However, since intentions to invest are, quite reasonably, based on the expectation of profit, and since the interest rate is only one of the *entrepreneur's* costs, increasing the money supply and lowering the interest rate may not raise the level of intentions to invest sufficiently. In this case direct investment by government will be needed to bridge the gap.

In the opposite case, if intentions to invest are greater than intentions to save, the government can tighten the money supply. This helps reduce intentions to invest, both directly, since less money for *investment* is now available, and indirectly, since the interest rate will rise. Governments may also move to control interest rates to prevent an unduly high price of money.

In Canada and most western countries information is now gathered about intentions to invest. The Dominion Bureau of Statistics and the Economics Branch of the federal Department of Trade and Commerce

jointly publish an annual booklet entitled "Public and Private Investment in Canada—Outlook (year) and Regional Estimates." Based on replies to questionnaires, this publication provides information on intentions to invest for the current year by sector, industry, region and categories of investment. (Copies may be obtained from the Queen's Printer.) Decision-makers in private firms and in government can see for themselves how their intentions to invest are likely to fit in with general economic conditions, and can judge whether changes in their intentions would be desirable.

Each level of government can, of course, revise its own *investment* intentions. In addition, the federal government may move directly to affect *investment* intentions in the BUSINESS SECTOR by changing some of the conditions under which it does business: for example, the tariff or tax structure. In certain cases the government may request that some intentions to invest be reduced or postponed.

It can be just as important for government to act when intentions to invest are greater than intentions to save, as it is for government to fill the gap when intentions to invest are less than intentions to save. If intentions to invest can be reduced to the level of intentions to save, then the pressure on interest rates is eased. And if less new investment is attempted at a time when there are shortages of *investment* goods or skilled labour, then the prices of these factors will be less likely to rise. Since price rises have a tendency to ray out through the whole economy, the relative price stability of these factors will serve as a check on rising price level. And last, but perhaps most important, if the economy can be kept from ever reaching a peak, unsustainably high at a given time, then the resultant forces leading to a trough will not be generated.

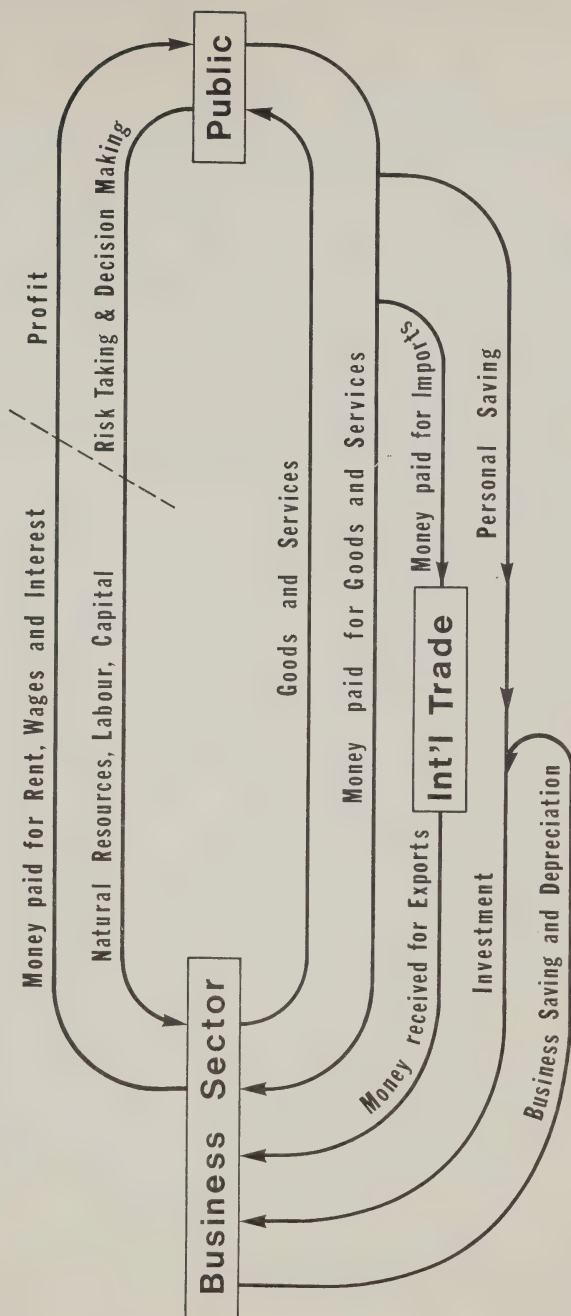
It is very difficult to decide just how much intentions to invest should be reduced in the GOVERNMENT SECTOR and how much in the BUSINESS SECTOR. Some people claim that all adjustments should be made within the GOVERNMENT SECTOR. But this position neglects the fact that the BUSINESS SECTOR is not always able to expand unless the GOVERNMENT SECTOR expands as well. For example, new *investment* by the BUSINESS SECTOR may increase the *demand* for roads or port facilities which must be provided by the GOVERNMENT SECTOR.

On the other hand, when the economy is doing very well, the GOVERNMENT SECTOR may find itself under considerable pressure from the electorate to provide additional public facilities, which could be postponed. This is not surprising. At first glance it seems reasonable to expect government to increase its spending when the economy is booming and to reduce spending when the economy slows down. As

we have now partly seen and as we shall see more fully in later chapters, it is to everyone's advantage if government does exactly the opposite.

DIAGRAM 3

INTERNATIONAL TRADE



5/International trade

In addition to showing the flows already discussed, this diagram shows the flow of money paid out for imports and the flow of money received for exports.

Exporting and importing is called **INTERNATIONAL TRADE**. This is a vital aspect of economic activity in Canada; because Canada is highly dependent on trade with other nations, we say that it has an "open" economy. A comparison emphasizes how "open" the Canadian economy is. About $1/5$ of Canadian production is produced for export. About $1/20$ of American production is produced for export.

Ontario has an "open" economy in two senses. The province is highly dependent on **INTERNATIONAL TRADE**, and is also highly dependent on interprovincial trade. We produce more in this province than we need for ourselves. We could not do this without ready markets in other provinces. Within Canada, Ontario faces none of the difficulties posed by tariff walls and foreign currency exchange rates in **INTERNATIONAL TRADE**; but, in other respects, the Ontario economy is affected by interprovincial trade in the same way that it is affected by **INTERNATIONAL TRADE**. You should keep this in mind as you consider **INTERNATIONAL TRADE**.

When we buy imports money flows from the people of Ontario to the **BUSINESS SECTOR** of another country. On the diagram this is represented by an arrow, flowing down from the arrow marked Money paid for Goods and Services, to a square marked **INTERNATIONAL TRADE**.

When we sell exports, money flows from the people of other countries into our **BUSINESS SECTOR**. The **BUSINESS SECTOR** receives this money in addition to money which Canadians spend buying goods and services they themselves have helped to produce. This is illustrated on the diagram by the arrow marked Money Received for Exports.

In each case, there is a reverse flow of goods and services. Arrows illustrating these reverse flows of real wealth are not marked on the diagram, because the more lines on the diagram, the more difficult it is to read.

At first glance it would appear that it is to our advantage to export and to our disadvantage to import. This is not necessarily so.

When people trade they are doing business, and they do business internationally for the same reason they do business at home—they want to be better off. It is possible to be better off by trading for two reasons. In economics, we call them *absolute advantage* and *comparative advantage*.

Absolute advantage is often a matter of climate or geography. For instance, we could grow bananas, but because we would have to use hot houses to do it, the bananas would be very expensive. In the same way, Jamaica could grow wheat, but not nearly as cheaply as Canada because the Prairies have natural advantages of soil and climate. We have an *absolute advantage* in growing wheat, Jamaica an *absolute advantage* in growing bananas. So if we continue to grow wheat and Jamaica to grow bananas, we can exchange or trade these products, and both Jamaicans and Canadians will be better off.

In the modern world most trade stems not from absolute, but from *comparative advantage*. In highly developed economies, like those of Canada and the United States, original geographic and climatic advantages have now been modified by historic growth, and *comparative advantage* in the production of any good or service results from the intermingling of many ripples in the economic pond. To see how *comparative advantage* works we will keep to the simple example of wheat and bananas.

Let us suppose that Canada can produce 100 bushels of wheat OR 80 bunches of bananas at a given cost in resources; for the same cost in resources Jamaica could produce 5 bushels of wheat OR 60 bunches of bananas. On the face of it, Canada could produce more wheat *and* more bananas, so why trade? But let us look a little more closely.

If Canada could trade 100 bushels of wheat for 120 bunches of bananas, we would be better off by 40 bunches of bananas, because we could have produced only 80 bunches of bananas with the resources used in producing 100 bushels of wheat. On the other hand, Jamaica could produce only 10 bushels of wheat with the resources necessary for the island to produce 120 bunches of bananas. If the two countries trade, Jamaica will be better off too—by 90 bushels of wheat.

Our greatest advantage lies in concentrating our production on those goods and services where we have a *comparative advantage* and seeking to increase our exports in those fields.

Tariffs are imposed to reduce or offset *comparative advantage*. Many countries impose tariffs while their industrial sector is developing. This is understandable. Industry provides employment for a larger work force and so allows for more population growth. Cities develop

which offer cultural advantages (as well as the drawbacks of traffic jams and air pollution).

Of course this does not mean that people who live in industrial countries are automatically better off than people who do not—any more than people who live in Toronto or Hamilton are automatically better off than people who live in our resource producing regions. What it does mean is that an industrial country can support a larger population at a good income per person. Poor countries are not poor because they concentrate on primary production. They are poor because the total value of their production is not enough to provide a good living for a large population.

But there is a cost to developing infant industries behind tariff walls, because in many cases goods could be imported more cheaply from another country with a highly developed industrial sector than they could be produced at home.

This cost is likely to be increased or prolonged by inefficiency. Even when industry has developed, some manufacturers may be tempted to hide behind tariff walls and not produce as cheaply as they could. Or because tariffs help to reduce competition from abroad, they may be



With a daily volume of approximately 5,300,000 shares, the Toronto Stock Exchange is the second largest in North America.

able to charge higher prices. Even efficient producers, who want to produce as cheaply as possible, may be hampered because the size of their home market is not big enough. If they were producing for a larger market, they could use longer production runs and this would reduce the per unit cost of production. To increase the size of the market, they must export but when they try to export, they run up against the tariff barriers of other countries.

The "Kennedy Round" of tariff negotiations at Geneva was an attempt to solve some of the problems created by such barriers to INTERNATIONAL TRADE. The negotiations lasted four years and were concluded in the spring of 1967. Canada was one of the forty seven countries which took part in these negotiations. Canada took part because our industry has now developed and, for the reasons just mentioned, we are seriously concerned with the question of tariffs.

As a result of the "Kennedy Round", tariffs on approximately forty billion dollars' worth of world trade will be reduced on average by about one third. Canada's most important gain is that tariffs will be reduced on about two billion dollars' worth of her exports to the United States.

The tariff reductions may cause some dislocation in Canadian industry because some manufacturers may have to plan more efficient production methods to enable them to compete with cheaper imported goods; and because some workers may need to retrain or relocate. The purpose of such dislocation (or change) is to shift resources, both human and material, into more efficient uses. We can then take advantage of the potential increase in our export markets, and the reduced price of imported goods.

Canada made a start in this direction when the "Automotive Pact" with the United States was concluded in 1965. There has not yet been time for all the effects of this Pact to work themselves out, but it is interesting to note that in 1966 Canada's exports of motor vehicles and parts rose by 179 per cent. (As mentioned previously, most of the Canadian automotive industry is in Ontario.)

The fact that the United States is our largest trading partner is the main reason why the well-being of the Canadian economy is largely dependent on the well-being of the American economy. Of special importance are our exports of forest products and raw and processed metals and minerals. The United States uses these to produce consumer durables—things like cars, refrigerators, washing machines. When the American economy is doing very well, production of these goods is stepped up, our exports increase and our economy does very well. But when the American economy slows down, production of durables falls, our exports fall and our economy slows down too.

Canada's largest single export is wheat, not from Ontario, but from the Prairie Provinces. A good deal of the money earned from wheat exports is spent by Prairie farmers on Ontario's manufactured products. Our stake in American *demand* for Ontario's forest and mineral products, and the connections between Prairie wheat exports and our manufacturers, are two main reasons why the Ontario economy is "open" to both international and interprovincial trade.

Services as well as goods are traded between countries. For instance, when an American tourist visits us, we are selling him a vacation service. American dollars flowing into our BUSINESS SECTOR have the same effect as exports. The reverse is also true. When you visit the U.S., you are buying a vacation service from another country and your Canadian dollars flowing out from our economy have the same effect as imports.

Foreign *investment* also has the same effect as exports. It is money flowing from the economic process of another country into our BUSINESS SECTOR. Interest and dividends which we must pay for the use of this money have the same effects as imports. They are money flowing out from our BUSINESS SECTOR into the economy of another country. Conversely, if Canadians invest capital in another country, this has the same effect as imports, while the money this *investment* earns for us, in the form of interest and dividends, has the same effect as exports.

The Balance of Payments

Canada totals up all foreign money which comes into Canada and all the Canadian money which leaves Canada. The result is called the *balance of payments* because it shows us whether, on balance, we owe money to other countries, or they owe money to us.

This account is divided into two parts. The first part is called *current account* and deals with the exports and imports of goods and services. Canada usually imports more than it exports, so we usually owe money on this account. We usually owe money to the United States, our largest trading partner.

The other part of the *balance of payments* account is called *capital account* and it shows us how much foreign capital has been loaned to, or invested in Canada and how much Canadian capital has been loaned or invested abroad. Since more foreign capital is invested in Canada than we invest Canadian capital abroad, and since the country which invests most in Canada is the U.S., on *capital account*, the United States usually owes us money.

When we put these two parts of the *balance of payments* account together we see that Canada uses the American dollars which have been invested in Canada to help pay the bill for our imports of goods and services.

The Foreign Exchange Rate

When we buy imports we usually pay for them in the currency of the country from which we buy them—just as foreigners pay for our exports in Canadian currency. The rate at which Canadian currency can be exchanged for another currency is called the *foreign exchange rate*. If market forces are left alone, this rate is determined by the law of *supply and demand*.

Before explaining how the law of *supply and demand* determines the *foreign exchange rate*, it is important to clear up a misunderstanding on the part of some Canadians. We call our smallest unit of paper money a dollar. The Americans call their smallest unit of paper money a dollar; but this does not mean that the two units represent or should represent the same value, any more than our dollar represents or should represent the same value as the pound or the peso.

If Canada were willing to exchange ten units of its money, which we happen to call dollars, for American currency, and the United States were willing to exchange ten units of its money, also called dollars, for Canadian currency, the result would be that the ten money units or \$10 Canadian would buy ten money units or \$10 U.S. and \$10 U.S. would buy \$10 Canadian.

If Canada were willing to change \$10 of its money into U.S. dollars but the U.S. were willing to change only \$5 of its money into Canadian dollars, then all that Canada could buy for its \$10 would be the \$5 U.S., and so each U.S. dollar would cost her \$2 Canadian. In the opposite case, each Canadian dollar would cost \$2 U.S. In real life, as it happens, the difference between Canadian and U.S. dollars has been quite small—usually 10 cents or less, one way or the other.

A change in Canada's *foreign exchange rate* has an important effect on our exports and imports, and on our *balance of payments*. If our dollar is worth, say, \$1.10 U.S., then it costs the United States more to buy our goods and services and so we tend to export less. At the same time, it costs us less to buy U.S. goods and services, and so we tend to import more. But if our dollar is worth, say, 90¢ U.S., then people in the United States can buy our goods and services cheaper

than they can buy their own, so we export more; while it costs Canadians more to buy U.S. goods and services than to buy their own, so we import less.

When businessmen in the U.S. want to invest in Canada, they too must change this money into Canadian dollars before they can use it to buy real capital—plant, equipment and machinery. The U.S. dollars which they bring to invest are held by the Canadian government in its *foreign exchange reserves* and used to pay our import bill.

Foreign exchange reserves is the name given to the money which the Canadian government holds in the form of gold and the currencies of other countries. Most of it is held in the form of United States dollars. From the point of view of the United States, these dollars are a liability and affect its *balance of payments* account. They are a liability in the same kind of way that the dollars in your bank account are a liability to the bank. The bank must pay them out to you whenever you choose to ask for them. United States currency is the world's principal trading currency so many countries hold U.S. dollars in their *foreign exchange reserves*. The United States is therefore liable to pay out many billions of dollars whenever these countries choose to ask for them. The United States would like to reduce its liabilities to the *foreign exchange reserves* of other countries. This is why it agreed to grant Canada virtual exemption from its guidelines policy provided Canada agreed to limit the amount of U.S. dollars in its *foreign exchange reserves*.

In the foreign exchange market, the *demand* for Canadian dollars caused by U.S. capital *investment* dollars forces up the Canadian *exchange rate*. Then our dollar costs more than the U.S. dollar. Our exports fall, and our imports rise. There is also a tendency for American *investment* to be reduced because it too becomes more expensive. It is to Canada's disadvantage to have these things happen just because our *foreign exchange rate* has risen.

This is why, in 1962, the Canadian government fixed the price of the Canadian dollar and made sure that it would cost less than the U.S. dollar. When this happened, market forces were no longer determining the *foreign exchange rate*. In the interests of the Canadian economy, that rate is now being controlled by the Canadian government.

Canada has undertaken to hold her *foreign exchange rate* at or about 92.5¢ U.S. This is partly because she is a member of the International Monetary Fund. The I.M.F. has requested all member nations to maintain a fixed exchange rate. If businessmen in trading countries can be fairly sure of how much money imports will cost them and how much

exports will earn, it makes trading easier. Trade is important to most countries. To a country with an "open" economy, it is especially important.

If the Canadian *exchange rate* rises, i.e., if it goes much above 92.5¢ U.S., this means the *demand* for Canadian dollars is increasing. To counteract this, the Canadian government must increase the *supply* of Canadian dollars available in the foreign exchange market. The way this market works is a special case of the law of *supply and demand*. The number of Canadian dollars we want to exchange for U.S. dollars is our *demand* for U.S. dollars. It is also the number of Canadian dollars we are prepared to *supply* to the foreign exchange market. So what the Canadian government does is to buy, or increase its *demand* for U.S. dollars. This increases the *supply* of Canadian dollars in the foreign exchange market and so the price of the Canadian dollar (its *foreign exchange rate*) tends to fall again. If the Canadian *exchange rate falls*, i.e., if it goes much below 92.5¢ U.S., the Canadian government does the opposite. It buys, or increases its *demand* for its own dollars. To do this, it sells, or increases the *supply* of U.S. dollars in the foreign exchange market. It is able to do this because it keeps a supply of U.S. dollars in its *foreign exchange reserves*. As previously mentioned, the Canadian government holds some of its money in foreign currency so that we can pay for our imports.

Trading Canadian dollars in the foreign exchange market has an effect on the Canadian domestic money supply. This can create a problem.

We have already seen that the Bank of Canada may need to tighten or decrease the money supply to assist in bringing into balance intentions to invest and intentions to save.

In making such adjustments the Bank of Canada must always take account of what is happening in the foreign exchange market. Sometimes control of the domestic money supply and control of the *foreign exchange rate* fit together very nicely, but not always. For example, if the *foreign exchange rate* is rising so that the Canadian government must increase the *supply* of Canadian dollars in the foreign exchange market, then these extra Canadian dollars cannot, at the same time, be part of the domestic money supply. If this happens when the business cycle is approaching a peak, it is likely that the Bank of Canada would, in any case, need to tighten the domestic money supply. But if Canada needs to put more of her dollars into the foreign exchange market at a time when the Canadian economy is slowing down and the Bank of Canada might therefore wish to increase the money supply, a most difficult choice of which to do might have to be made.

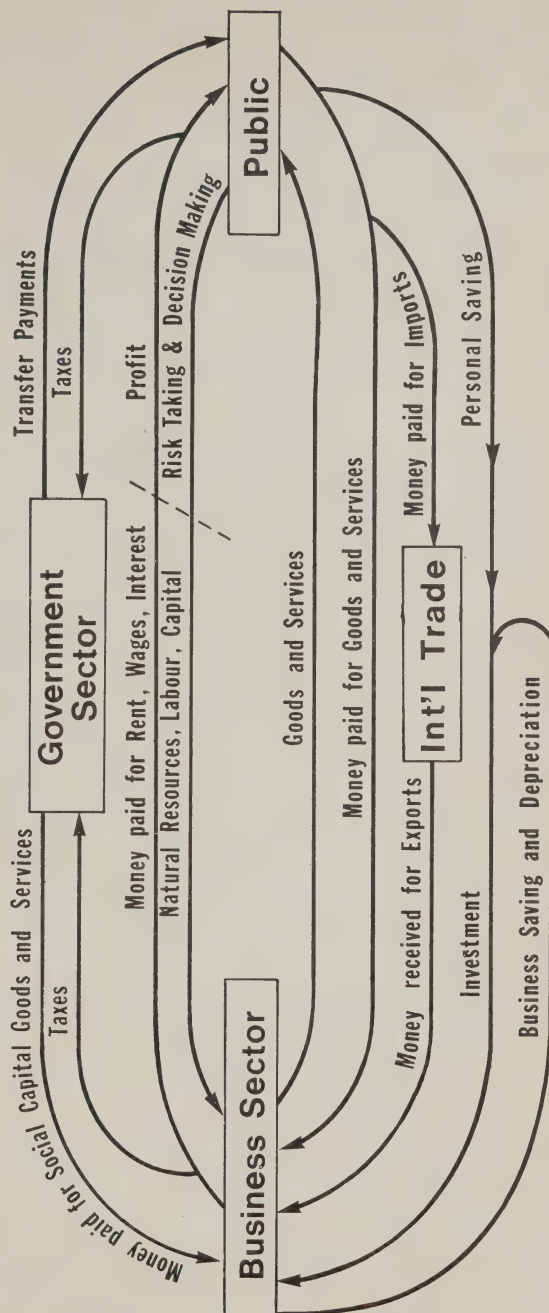
The business cycle, and other problems which arise in the economic process will be discussed in Chapter 7. At the same time we will consider in more detail what can be done to solve these problems. But since everything which happens in the economic process affects everything else, it is necessary first to complete the survey of the workings of this process.



Ontario Hydro's Little Long project, 42 miles north of Kapuskasing, is an important part of the province's capital stock.

DIAGRAM 4

SIMPLIFIED REPRESENTATION OF THE NATIONAL ACCOUNTS



6/The role of government

In addition to the topics already discussed, this diagram illustrates the relation of the GOVERNMENT SECTOR to the economic process.

Taxes

We all know that we have to pay taxes. On the diagram this is illustrated by two arrows flowing from the arrow marked Money paid for Rent, Wages, Interest, Profit to the GOVERNMENT SECTOR. This money does not flow directly from the BUSINESS SECTOR to the PUBLIC.

The important question is: what becomes of those taxes? Some taxes are used to produce real capital. As discussed in Chapter 1, real capital is plant, equipment and machinery. Since some forms of capital could not be conveniently produced by individuals or private firms, society instructs its government to produce them. Government, for example, builds roads, bridges, schools, hospitals; because these belong to the whole society, they are called social capital. Social capital is just as important for production as factories and machinery. You remember the orange grower who had to send his goods to market by truck along the road; and our discussion of how important it is to raise the level of skill and education of the work force? It is just as important to have a healthy work force.

However, health and education cannot be provided by buildings and equipment alone. The most important thing is to provide a flow of health and education services: the highly skilled services of teachers, doctors, nurses and those in related fields. To a large extent, the government uses your taxes to pay for these services—especially education services. The government also provides public administration services to administer the laws and, as the British North America Act puts it, provide peace, order and good government. Without this framework an economic process would scarcely be possible.

Some social capital is built by the GOVERNMENT SECTOR using the Department of Highways or the Department of Public Works. But most of it is built by private contractors who are paid by the govern-

ment. In either case, money flows from the GOVERNMENT SECTOR to the BUSINESS SECTOR to buy goods and services. The GOVERNMENT SECTOR also buys goods and services to carry out its work of public administration. This is illustrated on the diagram by the arrow flowing from the GOVERNMENT to the BUSINESS SECTOR and marked Money Paid for Social Capital, Goods and Services. The benefits of social capital and of goods and services purchased by the GOVERNMENT SECTOR flow back to the PUBLIC. The need to supply them—the PUBLIC demand for them—is one of the main reasons you pay taxes.

Transfer Payments

The other main way in which the GOVERNMENT SECTOR spends your taxes is by making *transfer payments*. Transfer payments to persons include Old Age Security, Family Allowance and Unemployment Insurance payments. This is illustrated on the diagram by an arrow flowing from the GOVERNMENT SECTOR to the PUBLIC. This money does flow back to the PUBLIC; it just takes a detour through the GOVERNMENT SECTOR. Like the money paid for the use of the *factors of production* and for risk-taking and decision-making, it therefore becomes part of the money which the PUBLIC has available to save, to spend buying imports, or to spend buying Canadian-produced goods and services.

Transfer payments to persons tend to transfer money from people who have larger incomes at a certain time to other people who have smaller incomes at that same time. Because it is more difficult to save with a smaller income, *transfer payments to persons* tend to reduce saving and increase consumption.

Part of the reason that *transfer payments to persons* are made is that no wealthy society which considers itself civilized—and Canada is certainly one of them—would wish to see some of its members without the necessities of life. But as we shall see later, *transfer payments to persons* can also serve a useful economic purpose.

In considering *transfer payments to persons* it is also necessary to remember that many people who receive them have also helped to pay for them, though not necessarily at the same time as they receive them. People working now, for example, pay the Old Age Security Tax. When these people retire they will receive Old Age Security payments. Many people working now also pay Unemployment Insurance premiums. If these same people became unemployed, they will receive Unemployment Insurance payments.

Transfer payments to persons are only a part of the total *transfer payments* made by the GOVERNMENT SECTOR. Total *transfer payments* include payments to institutions, such as hospitals and universities; to other government bodies like the Ontario Development Corporation, which assists small businesses, or the Ontario Housing Corporation, which lends money for home building; subsidies to the BUSINESS SECTOR, to farmers, for instance; and interest on the public debt.

The flow of price decisions which govern the economic process goes through the GOVERNMENT SECTOR too. Since money is our measure of material value, every good and service has a price tag. As voters, you elect government to act on your behalf and to do those things which you think are better done by society acting as a whole rather than by individuals. You pick up the price tag by paying your taxes. It is therefore important that you understand the role of government in the economic process and cast your vote carefully.

The National Accounts

We have now mentioned the main flows of real wealth and the reverse flows of money which together make up the economic process. This process is recorded in the *National Accounts*. You will notice that Diagram IV is labelled *Simplified Representation of the National Accounts*. Statisticians and economists working for the Dominion Bureau of Statistics prepare the *National Accounts* by keeping check on that continuous flow of price decisions which govern the economic process.

These accounts show, on the *supply* side, the value of production by the various sectors of the economy; and on the *demand* side, the value of the expenditure by the various sectors. It is the total value of production which is the *Gross National Product* or G.N.P. of the economy. The total value of expenditure is the *Gross National Expenditure*. Since everyone's income is someone else's expenditure, the accounts balance.

Copies of the *National Accounts* can be obtained from the Queen's Printer.

The Government Sector in a Federal Country

So far, we have spoken of the GOVERNMENT SECTOR as if only one government were involved. In Canada this is not so. As a federal

country, we have three levels of government—federal, provincial and municipal. The B.N.A. Act lays down which responsibilities are federal, which are provincial and which are joint.

Taxes are shared between the federal government and the provinces according to a series of rather complicated agreements which are renegotiated every few years. We can describe these briefly under three headings: Tax-sharing, shared-cost programs and equalization payments.

TAX-SHARING

Both the federal and provincial governments levy taxes on the incomes of corporations and individuals. The tax-sharing agreements set out how this revenue will be shared between the two levels of government.

The tax-sharing agreements also include collection agreements. All the provinces, except Quebec, have entered into collection agreements with the federal government, under which the federal government collects the personal income taxes on their behalf. Similarly, for all the provinces except Ontario and Quebec, the federal government collects taxes on corporation income. An agreed percentage of these taxes is then returned by the federal government to the provinces.

Each province is free to set its own rate of tax on either personal or corporate income; but all the provinces and the federal government agree that the definitions of income on which tax is paid (the tax base) will be the same throughout Canada.

The present difficulty with the tax-sharing agreements is that education, health and municipal services are among provincial responsibilities. Because of rapid population growth, technological change, and the move to the cities due to increasing emphasis on secondary and tertiary industry, these responsibilities have become very expensive. Combined provincial and municipal expenditures are now greater than federal expenditures and are growing faster. The provinces are therefore asking that a larger percentage of the direct taxes be returned to them. In turn the municipalities are asking the provinces to finance a larger portion of municipal expenditure responsibility, such as local school costs.

SHARED COST PROGRAMS

Under shared-cost programs, the federal government pays an agreed share of the cost of such a program to any province willing to introduce and operate a program meeting federal government conditions. An example of a shared-cost program is hospital insurance. At the present time, Quebec has taken over complete responsibility for a series of programs which, in the other provinces, are shared-cost programs. In

return, the federal government has returned to Quebec an additional share of the personal income tax.

EQUALIZATION PAYMENTS

The federal government also makes equalization payments to those provinces in which the amount of taxable income is relatively less than the average of all the provinces. Canadians agree to this because we wish to see that, as far as possible, the same standard of public and social services is available to all Canadians.

Government Debt

In addition to raising taxes, all levels of government also borrow money. They do this for several important reasons.

Governments, like private firms, borrow money by floating bond issues in the money market. This offers people the opportunity of lending money to the government—and earning interest on it—instead of paying additional taxes. At the same time, buying government bonds is a way of saving money, and since it is a very safe investment, it is popular with Canadians.

The individual cannot choose whether or not he will pay his taxes (though, of course, he can vote for or against the government which levies them). But if taxes provide less money than the government needs, the individual can choose whether or not to save some of his money by buying government bonds.

Floating government bond issues also gives the government the opportunity to encourage savings at a particular time, by offering especially attractive terms, if it judges it is in the interest of the whole economy to do this.

Some government expenditures benefit future generations as well as the present generations. In some cases, future generations will benefit more. Building schools is an example of this. If such government spending were all covered by taxes, the present income-earning generation would be paying the whole of the cost.

Bonds issued by Canadian governments are frequently bought by Americans. Thus, Canadians are able to use U.S. savings to increase their stock of social capital.

Floating government bond issues raises two main difficulties. Since private firms and the various governments all float their issues in the money market, the BUSINESS SECTOR and the GOVERNMENT SECTOR are competing for the use of available funds. If *demand* for investment funds by the BUSINESS SECTOR is high, this can cause

dissatisfaction. This problem is really that of the money market asking the question raised in Chapter 4: how far should intentions to invest be adjusted in the BUSINESS SECTOR and how far in the GOVERNMENT SECTOR? There is no final answer to this question because economic conditions are continually changing. We can, however, make every effort to improve our understanding of what is involved and so improve the chances of a wise decision at any given time.

The second problem arises because, as discussed in Chapter 3, the Bank of Canada controls the money supply by buying and selling government bonds. If the Bank of Canada sells bonds, the money supply is tightened. Therefore, if the Bank of Canada, acting as agent for the federal government sells the bonds of a new issue at a time when it wishes to tighten the money supply, it can achieve its aim by doing this. But the federal government requires a more or less continuous flow of borrowed funds, while the need to tighten or loosen the money supply changes from time to time. Close cooperation and careful calculations by the federal treasury and the Bank of Canada are required to overcome this problem.

Additional Responsibilities of the Government Sector

Since the Second World War the people of all western countries have instructed their governments to take increasing initiative in fostering economic development and in seeking solutions to economic problems. Different western countries have set out slightly different economic goals or priorities between goals which tend to conflict. For example, it is often difficult to maintain a high economic growth rate and price stability.

In its *First Annual Review*,¹ the Economic Council of Canada listed five goals which it felt Canadians should strive to achieve simultaneously. These are full employment, a high rate of economic growth, reasonable price stability, the strengthening of Canada's international economic position and regionally balanced growth.

Problems arise in trying to reach each of these goals and additional problems arise in trying to reach them simultaneously. The next chapter is devoted to a resumé of the main economic problems which Canadians face and what we might do to solve these problems.

¹Economic Council of Canada, *First Annual Review* (Queen's Printer, Ottawa, 1964). The Economic Council of Canada has now published four annual reviews. Technical language is avoided in these Reviews and they are valuable reading for all interested Canadians.

7/Problems and solutions

Three types of problems arise in the economic process: those connected with economic development, those due to the *business cycle*, and those due to seasonal variations. For the sake of clarity these will be discussed separately but it is important to remember that elements of all three are usually present in the economic process at the same time.

Seasonal Variations

Seasonal variations occur because some kinds of economic activity can be carried out at certain times of the year only. At other times, persons who follow these occupations may be unemployed.

In Canada, seasonal unemployment is a long-standing economic problem. Unemployment usually reaches a peak in late winter or early spring, indicating the slowdown in certain kinds of economic activity which occurs in the winter time.

Although our climate does pose real problems, studies have shown that custom and tradition also contribute to unemployment in the winter time. A striking example of this is found in the construction industry.

In recent years the GOVERNMENT SECTOR has made considerable efforts to solve this problem. The winter works program and the advertising campaign, "Do It Now While Men and Materials Are Available", attest to these efforts. Improved technology has also increased the amount of construction work which can be done in the winter months.

The Dominion Bureau of Statistics issues some of its figures on a seasonally adjusted basis. This is done to assist economists and others who use the figures to distinguish seasonal from other economic problems.

The Business Cycle

Instead of expanding smoothly, the economic process tends to speed up until it reaches a peak, flatten out, slow down, and then begins all

over again. Because this pattern keeps on repeating itself, it is called the *business cycle*.

The interaction of all the possible causes of a *business cycle* is not yet fully understood, but from what we know at present, what happens is something like this.

An upswing usually begins with an increase in real wealth which leads to an increase in *demand*. This leads to an increase in *supply*, often a further increase in real wealth, and so on—as was discussed in Chapter 2 when the simple market model was described. As these increases in *demand* get bigger and faster, it becomes more difficult for *supply* to keep up. Factories are working to capacity. Most people are employed. Many people are working overtime. The only way we can increase *supply* further is to build more factories, train more people—and this takes time. In the meantime, the extra money which makes increased *demand* possible is still in circulation. Since there are more people with money to spend than there are things to buy, prices rise. Putting the extra *investment* to work to provide the new *capital goods* necessary to increase production, itself uses labour and materials already in short *supply*, and this puts more pressure on prices. Because people tend to be optimistic when the economy is on an upswing, they feel confident that extra profit can be made by increasing production, so they try to invest more—more than is being saved. Sometimes natural shortages occur too—say a shortage of fruit or vegetables due to a poor growing season. Such shortages are bound to happen from time to time, but if they occur when other prices are rising, it makes everything that much worse.

At the peak of the cycle two things have happened which lead to a downturn. The ability to produce or *supply* goods and services is now greater than *demand*, and firms are spending more than they can earn. The new *capital goods* produced on the upswing are costing more money. The price of money (the interest rate) is high because the *demand* for money has been increasing.

Production has been geared to a certain level to obtain the best cost performance, but more is being produced than can be sold, so inventories pile up. After a time it becomes less expensive to cut back production than to hold inventories, so lay-offs begin. When fewer people are working, less money is earned, less money can be spent, and *demand* falls. Production is cut again and so on. There is not much incentive for new *capital investment* so there is not much *demand* for money, and the price of money falls. People are trying to save more than is being invested.

Eventually a point is reached where not enough goods and services are being supplied. At this point, there is unemployment both of production capacity and labour, so it is fairly easy to increase *supply*, and the cycle begins to rise again.

The pattern of the cycle is complicated by bottlenecks. Increasing *demand* does not spread evenly through the market. It gets stuck at certain points causing excessive *demand* for particular goods, and then for the labour skills and materials needed to produce them. This can happen at the same time that other people are unemployed. Bottlenecks can occur either when the economy is on the upswing or the downswing and for this reason rising prices and unemployment can occur at the same time.

The old idea was that the market forces, left to themselves, would, in the long run, work through such difficulties and find a new *equilibrium*. But as the great economist once expressed it, "In the long run we are all dead". From the history of the 19th and the early 20th centuries, culminating in the Great Depression of the 1930's we have learned that unaided, market readjustment is a painful and a costly process.

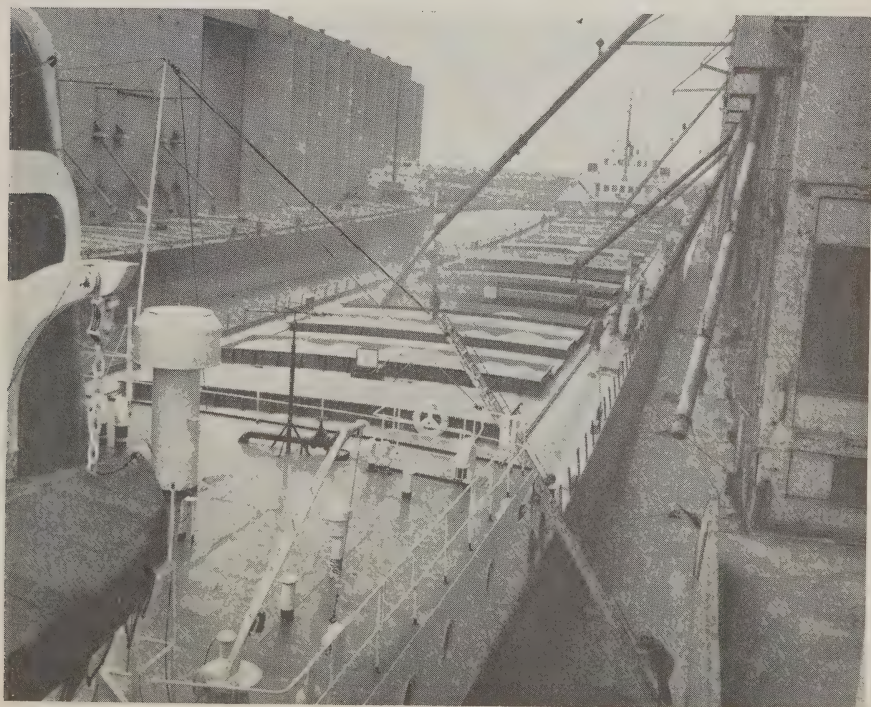
Measures taken to control the *cycle* are called *counter-cyclical measures* because they work against the *cycle*. Two of these have already been mentioned: tightening or loosening the money supply, and endeavouring to bring intentions to save and intentions to invest into balance.

A government budget can be used for the same purpose. If the *cycle* is approaching a peak and *demand* is greater than *supply*, the government can reduce *demand* by running a surplus. It does this by drawing out of the circle of flow, by taxing or some other means, more money than it plans to spend immediately. Later on, when the *cycle* passes the peak and begins to slow down, government can put this money back into circulation. If necessary, it can counteract the slowdown even more by going into debt, or, as we call it, running a deficit. For the reasons discussed in Chapter 6 government is often in debt anyway. In this case, the same effect can be obtained by increasing or decreasing the size of the government debt.

We can now see more clearly why it is wise for government to reduce its spending when the economy is doing well and increase it when the economy slows down. Money spent cannot, at the same time, be withdrawn from the economic process; nor can it be put back into circulation when the economy slows down. At the same time, if government spends extra money when the economy is reaching a peak, it puts further pressure on the *demand* for materials and labour already in

short *supply* whereas it could usefully help to take up the slack when the economy is slowing down and materials and labour are likely to be unemployed.

It is possible to use the flow of money (which we saw in Chapter 3 is largely credit) to help in controlling the *cycle* because we have now developed the use of money to such an extent that the flow of real wealth and the flow of money depend on one another. No matter how much you want to buy something, you cannot, unless you have the money. No matter how much you want to sell something, you cannot, unless someone has the money to buy it. Most of us want to sell labour, but some people want to sell material resources or the use of capital. If you are unable to sell your labour, you have no income, and without income, you have no money to buy things. If you have no buying power, the producer cannot sell his goods and he will have no money to buy your labour. Because the flow of the economic process is circular, the effects of money put into or taken out of the process will eventually be felt all the way around just as, as we saw in an earlier



Wheat is loaded aboard a grain carrier at Fort William-Port Arthur, western terminal for the 2,200 mile St. Lawrence Seaway System.

chapter, the effects of an increase or decrease in real wealth will eventually be felt all the way around.

We know that *monetary* and *fiscal policy* can help to control the *cycle*. *Monetary* is the adjective of the word money, and refers to the control of the money supply, interest rates, etc. *Fiscal policy* refers to the raising and spending of government revenue. Both *monetary* and *fiscal policy* have been used to help control the *cycle* since the end of World War II. Since that time, there has been no major depression in Canada.

As a further aid to *counter-cyclical control*, the government has built into the economic process *automatic stabilizers*. These are things which automatically help to keep the circular flow steady. Unemployment insurance is one of them. If a man loses his job he loses his income and without income, his *demand* for goods and services falls. Unemployment insurance helps to cushion this fall. For instance, if he were earning \$70 a week, and his insurance is \$35, the fall in *demand* is cut in half. On the other hand, when he is earning money he must pay the insurance premium. This money is drawn out of circulation and has a slowing-down effect.

The same kind of thing happens with pay-as-you-earn income tax. When you earn more you pay more tax and with pay-as-you-earn some of the extra is immediately drawn out of circulation.

Counter-cyclical control is a delicate and complex task. Many factors must be taken into account at the same time. The control of each factor is difficult and itself affects the behaviour of other factors.

As was explained in Chapter 3, providing an adequate *supply* of money is always complex. We saw in Chapter 4 that it is also related to the task of bringing intentions to invest and intentions to save into balance; in Chapter 5, the importance of its relation to the *foreign exchange rate* and that this rate is vital to Canada's open economy; and in Chapter 6, that the floating of federal government bond issues affects the money supply. In addition, deciding how much to tighten or loosen the money supply and when to do this for *counter-cyclical control* is of itself complex. No small part of the problem is judging the length of the *time lag* and allowing for its effects. And the controlling action taken will in turn affect the behaviour of all the factors connected with the control of the money supply.

Using the government budget for *counter-cyclical control* is no less complicated. In Canada there are eleven governments and therefore eleven government budgets. There are also a large number of municipalities with substantial budgets. In general, it has been the federal government which used its budget for *counter-cyclical control*.

In doing this, great care must be used in determining which government projects can be speeded up or postponed without upsetting the provision of necessary services or long-run plans to provide for the needs of a fast-growing economy. It is therefore only a small percentage of the government budget which can normally be used for *counter-cyclical control*. But, as with the money supply, whatever action is taken will affect the behaviour of all the factors connected with the raising and spending of money by government.

On the other hand, the fact that so many factors are involved in *counter-cyclical control* does mean that a "mix" of measures can be worked out and this "mix" can be changed as economic conditions change.

Counter-cyclical action by government is necessary but it is not sufficient. For example, government action cannot always reach bottlenecks. Sometimes these can only be cleared if the BUSINESS SECTOR and the PUBLIC choose to reduce excessive *demand*. A shortage of *supply* can be for a particular kind of skilled labour and it can occur when other people are unemployed. Obviously, the unemployed people would be better off if they could get jobs; and we would all be better off if we could bring additional productive factors into the circle of flow. But a person cannot do work he is not trained for and it is often impossible for him to work a couple of hundred miles away from where he lives. He must learn the skills that are in *demand* and he must take them to the place where they are in *demand*.

Even if government controls the money supply, the price level will still rise if everyone earning extra money tries to spend it all before *supply* can catch up with *demand*. And it will rise if business firms or individuals show by the prices they are prepared to pay that the *demand* for certain goods and services is becoming more *inelastic*.

Everyone can help with this problem. When the economy is on the upswing, pay is good and you are earning overtime, think before you spend it all. If you save some of the extra, your own financial position will be better. You will have something for a rainy day. You can invest and earn interest or dividends. And you will not be pushing up *demand* against goods in short *supply*, forcing prices to rise. When prices rise, your money buys less.

Before you buy that extra thing on the instalment plan, think. How much do you have to meet in other payments already? How much is it costing you? Would you be better off to save now, buy later?

The GOVERNMENT SECTOR can and does publish the information it has gathered about intentions to invest. Decision-makers choose whether to use this information or not. All these considerations become

more and more important as the rate of change in the economic process increases at a faster and faster rate.

Because *counter-cyclical control* is so complicated, and because the need to plan for economic changes must always be taken into account at the same time, there is room for honest difference of opinion about the correctness of government policy at a given time. But the economic process rests on interdependence. If we are to maintain a fast economic growth rate and keep the difficulties of inflation and recession to a minimum, we must all become conscious of what effects our economic actions will have.

It is important that as many people as possible understand what is being attempted and why. We can all choose to act for growth and stability or against it.

Problems Connected with Economic Development

Numerous problems can arise in the economic process connected with economic development. Among the more important are: improving productivity, changing the use of resources to meet changes in *demand*, making changes to enable us to take advantage of improved technology, improving mobility, increasing our share of world trade, overcoming shortages and clearing out bottlenecks, regional development, and the rising price level. These problems are linked and in some cases the same corrective action will help to solve more than one problem.

PRODUCTIVITY

As explained in Chapter 2, *productivity* is how much we can produce per man-unit of time, per man-hour or per man-year. The more goods and services which can be produced from a given quantity of resources, the more real wealth is brought into existence. Raising the level of *productivity* as high as possible is therefore a matter of some importance. The level of Canadian productivity is not satisfactory. It is approximately 20 per cent below that of the United States, and its rate of increase is below that of most of our international competitors.

If we do not improve *productivity* we risk being priced out of the international market. An open economy cannot afford that. If we cannot compete in offering a good living standard, good rates of pay and good job opportunities, which result from high *productivity*, we also risk losing skilled workers to the United States.

If Canadian rates of pay are increased without an improvement in *productivity*, what goes up is not the living standard but the price level. Pay is higher in the U.S. because the additional money represents additional value which is produced because of higher *productivity*.

Special problems can arise in Canada because in some industries *productivity* may be equal or superior to that of the same industries in the U.S. A demand for wage parity in those industries is therefore understandable. But within Canada, a wage increase in one industry usually encourages similar demands in other industries where *productivity* may be lower. This is another important reason for raising the level of *productivity* throughout the Canadian economy.

CHANGING THE USE OF RESOURCES

When the simple market model was introduced in Chapter 2 we saw that changes in *demand* lead to changes in the use of resources. In the real world, changes in *demand* occur in the international market as well as in the domestic market. Since Canada has an "open" economy in the inter-provincial as well as the international sense, we must be equally prepared to adapt to both. Because technology is changing rapidly, the rate of change in *demand* is also quickening. New and improved goods and services are appearing on the market all the time. Improving technology is also increasing production and therefore increasing income. This, too, is affecting the rate of change in *demand*. As people earn more money the way in which they spend money tends to change.

ADAPTING TO TECHNOLOGICAL CHANGE

Technological change is now the most important single factor influencing economic development. It offers great benefits. It is because technology is improving, and at a faster and faster rate, that it is possible to produce wealth more and more quickly. We must therefore constantly improve our ability to adapt to technological change.

MOBILITY

In economics, *mobility* means the fast and efficient movement of resources. *Mobility* is vital to economic development.

The resource which has the highest rate of *mobility* is capital. This is because capital is shifted through the use of money. Money can be shifted by figures flashed through a computer or a voice spoken over the telephone. The use of credit plays an important part in this shift. For example, real capital which has already been produced can be used as security to obtain the use of money.

We must also improve the *mobility* of physical resources, natural resources as well as goods which have already been produced, and encourage the *mobility* of the labour force.

INCREASING OUR SHARE OF WORLD TRADE

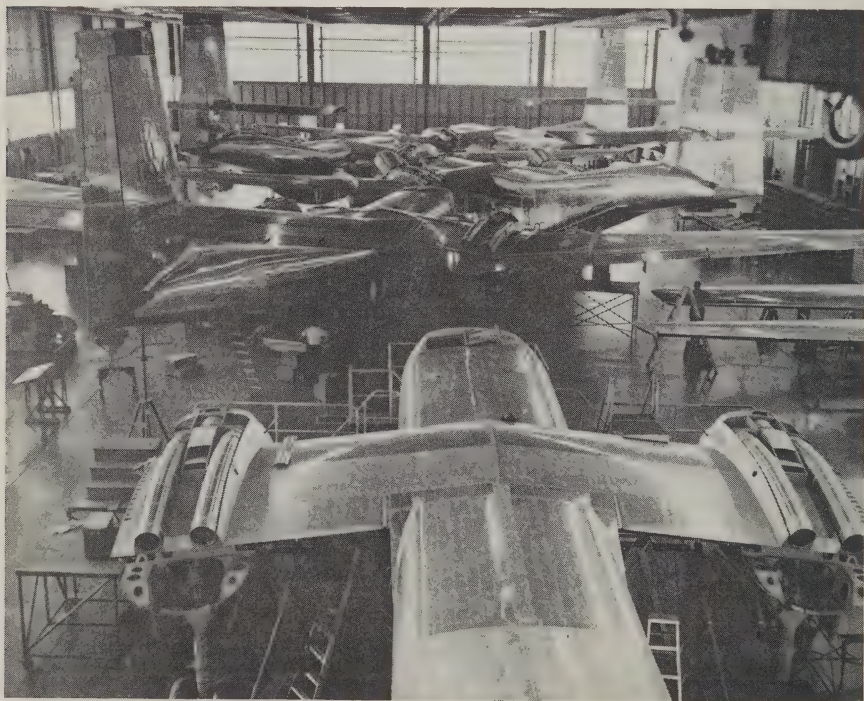
We have seen that because the Ontario economy and the Canadian economy are open, it is very important that we maintain our trading

position. It is even more important to improve this trading position. Ontario's population is growing but it is still just a little over seven million. This does not provide a sufficiently large market to allow us to use all our resources in the most productive ways. If we are to maintain economic development we must increase the size of our export market.

SHORTAGES AND BOTTLENECKS

In a fast-growing economy, shortages occur. Ontario's most serious shortage is of skilled labour. Because the population is increasing and tending more and more to live in towns and cities, we also have shortages of housing and of transportation.

When production of a particular good or service cannot keep up with the *demand* for it because there is a shortage of one of the factors necessary to produce it, this is called a *bottleneck*. *Bottlenecks* are serious in themselves. In addition, the results of *bottlenecks* can have an adverse effect on many other parts of the economic process. Endeavouring to foresee where *bottlenecks* might occur and trying to prevent shortages which cause them is, therefore, an important part of economic planning.



Aircraft built at Downsview, Ontario, are exported throughout the world.

Towards Solutions

We must raise the level of skill and education of the labour force. This will help to improve *productivity*, to speed up changes in the use of resources, and to adapt to technological change. It will also help reduce Ontario's shortage of skilled labour.

In turn, rapid adaptation to technological change is an important part of improving *productivity*; and all the benefits which follow from improving the quality of our labour force will help us to expand our export markets.

To improve *productivity* we must also encourage scientific research; foster the increasing skill and efficiency of our managers and *entrepreneurs*; foster good labour-management relations so that time lost through strikes and lock-outs is kept to a minimum; encourage the shift of resources to higher *productivity* industries and locations; and explain to as many people as possible that ability to produce wealth depends on human initiative, skill and efficiency.

Improved *productivity* will assist us in increasing our exports. In addition we must continue assisting *entrepreneurs* to seek out new export markets, to learn which goods and services—which can be produced efficiently in Ontario—are in *demand* in these markets, and to concentrate production on these goods and services.

To help solve all the problems connected with economic development, we must improve *mobility*. We must continue improving transport and communication so that human and material resources can be moved rapidly. We must also improve the flows of public information and encourage people to use this information so that they can take advantage of changes and be ready to retrain and relocate.

To reduce shortages, we must improve forecasting techniques, improve cooperation between all levels of government, improve cooperation between the GOVERNMENT SECTOR and the BUSINESS SECTOR, improve the *mobility* of resources, raise *productivity* and take advantage of technological change.

Regional Development

The Canadian economy is frequently described in terms of economic regions, the Maritimes, Quebec and Ontario, the Prairie Provinces, and the West Coast. Each of these regions has different economic potential and problems.

For development purposes Ontario is now divided into ten economic regions. The aim of regional development is to assist each region to develop its potential for specialization.

For this purpose it is necessary to make careful studies of the resources of each region and of the most efficient ways in which these resources can be combined to produce goods and services which are in *demand*. In doing this it is necessary to take into account the problems of *productivity*, changes in *demand*, technology, *mobility*, and trade, and also to consider the development of each region in relation to the economic development of the province.

The Rising Price Level

We know some but not necessarily all the reasons why the price level is rising.

Prices rise if *demand* is greater than *supply*. This often happens when the *cycle* is approaching a peak. If *demand* is *relatively inelastic* prices may not fall much, even when *supply* catches up with *demand*.

Apart from the cycle, there are always some goods or services for which *demand* is greater than *supply*. This may be caused by a shortage due to natural causes, a crop failure, for example, to a sudden change in *demand* or to the appearance of a new product on the market. In time, *supply* will catch up with *demand* and insofar as the *elasticity* of *demand* permits it, the price will fall. But in the meantime the *demand* for other goods and services will have exceeded *supply*. It is likely, therefore, that excessive *demand* for some goods or services is always having an effect on the general price level.

Economic expansion itself may have an effect on the general price level because some forms of development are very expensive. It can, for example, cost billions of dollars to set up a hydro-electric power system. Again, once the new system is adding to the *supply* of power, it is likely that the unit cost of power will be reduced. The additional power available will also add to productive capacity. But in the meantime some other new development scheme will be under way.

As our scientific and technical knowledge expands, the rate at which new products and economic development schemes are appearing is increasing. The importance of these problems is therefore increasing.

There is also the interesting problem of affluence. When people enter a higher income group, it usually takes them a little while to learn how to spend the extra money in their own best interests. In the meantime they tend to spend less carefully than usual. This is understandable. It is a delightful feeling not to worry about a little extra spent here and there. But since the Second World War a great many people have been moving up the income scale at quite a fast rate. This could mean that

spending patterns have been more or less constantly unsettled over quite a long period and that this has been reflected in the *elasticity of demand*. This in turn would affect the price level.

These are the main reasons why many economists think some rise in the price level cannot be avoided in a fast-growing economy. It is important to understand that the development of new products and new expansion schemes have greatly speeded up economic development. This, in turn, has provided rising incomes and a better living standard. It is also important to understand that the quality of many goods and services we can now produce has improved dramatically. Medical care, for example, is more expensive now than it was fifty years ago, but the change in quality is startling.

Provided that rising income keeps pace with the rising price level, people are no worse off than if the price level did not rise. At any one time there are always some people with a fixed income who are worse off when the price level rises, and this is one of the important reasons why the rising price level is a matter for concern. But to the extent that income rises faster than the price level, people are better off; and over a long period income has risen faster than the price level.

Obviously, we would be better off if we could check the rising price level. If people choose to become aware of the real nature of price decisions, this may be possible.

People, consumers, producers, voters, taxpayers, decision-makers in the BUSINESS SECTOR and the GOVERNMENT SECTOR, all express their decisions about the value to them of goods and services through the law of *supply and demand* and through the *elasticity of demand*. These decisions are based on judgment.

No one can say: a certain good is worth a dollar; therefore its true price is a dollar and should always remain a dollar. It is only worth a dollar so long as it can be sold for a dollar. If people become willing to pay two dollars for it, then they are expressing a different decision about its value to them.

There is no such thing as perfect judgment; and sometimes we must have a good or service whatever the cost. Probably, therefore, we do have to accept some rise in the price level. But if we will all remember that money, like fire, is a good servant but a bad master, we may keep this rise to a minimum.

Economic Development and Stability

The aim of economists is to achieve economic development and stability at the same time. To do this it is always necessary to take

account at the same time of seasonal and cyclical problems and the problems connected with economic development. This is a large task. If it is to be successful, all sectors of the economy must cooperate.

Some of the work can be and is done by the **GOVERNMENT SECTOR**. Both the federal government and the provincial governments employ economists to try to work out what economic action government should take and what the effects will be. A year ago, the Ontario government set up the Office of the Chief Economist. This Office is divided into six branches—Economic Planning, Federal-Provincial Affairs Secretariat, Applied Economics, Economic Analysis, Ontario Statistical Centre and the Regional Development Branch. Economists working in these six branches study problems, try to forecast future needs for social capital and for the skill and education levels of the work force, consider how each region of the province can best be developed and what can be done to foster cooperation among the people of Ontario to improve our economic well-being.

The Economic Council of Canada makes long-range studies of the Canadian economy as a whole, sets goals which must be reached if we are to provide a high living standard for all Canadians, and draws attention to special problems which can affect the nation as a whole.



The Spadina Interchange on the MacDonell-Cartier Freeway in Toronto.

The Ontario Economic Council is comprised of knowledgeable citizens from the various sectors of the provincial economy. It initiates research projects through the universities and within government in areas of potential growth.

Some of the work can be and is done by the BUSINESS SECTOR. Many firms and trade unions now employ economists to study what is happening in the economic process and consider how industry and labour can best deal with problems as they arise.

Both the GOVERNMENT SECTOR and the BUSINESS SECTOR are assisted by the work of economists in the universities who continue basic research into the workings of the economic process and act as advisors to government and industry.

These efforts are important and are gradually improving our knowledge of the economic process and our ability to control it. But we also need widespread PUBLIC understanding of what the economic process is and how it works. It is members of the PUBLIC who belong to unions, who are the shareholders of companies, who elect governments. It is members of the PUBLIC who sell labour to the BUSINESS SECTOR and earn 75 per cent of the National Income for doing so. And it is the PUBLIC that buys and uses much of the wealth it helps to produce.

We might compare the role of the economist with the role of the doctor. You know that medical science has learned a great deal about the ills of the human body; if you need professional medical care you go to a doctor. But one of the most important things medical science has done for modern man comes under the heading of preventive medicine. Thanks to widely spread public information, based on scientific research, everyone now knows how to keep himself in normal health—what foods to eat, how much to sleep and so on. The same thing can happen with the economic health of the individual and the society. You can learn, if you wish, why it is important to be trained and educated, to be ready to retrain and relocate, to give a fair day's work for a fair day's pay, to spend and save your money sensibly. You don't have to. Lots of people drive and drink, and the accident statistics chalk them up, regular as clock work.

In our kind of society, the public is not told what to do. Information is offered to you. The rest is up to you.

How Fast is Go?

We are one of the richest countries in the world and we are getting richer all the time. But it seems that the more we get the more we

want, and the faster we want it. Up to a point this is useful. It provides the drive necessary to increase our real wealth. But nothing works if carried to extremes. We must be realistic about our expectations. We must assess, as clearly as we can, how fast is reasonable. And we must remember what was said at the beginning of this book: real wealth does not just happen. It is the production of man.

How many of us really have the training and skill necessary and are really prepared to carry the work load and the responsibility necessary to earn the income we would like to be paid?

And how much of that feeling of irritation you tend to blame on insufficient income is really because you are not spending yourself as well as your money?

What Shall we do with our Wealth

Many topics are omitted from this book. We have not, for instance, discussed the quality of life; income redistribution; equality of opportunity for all Canadians; changes in our social and cultural life due to the size and rate of changes in our economic life; the effects on the economic process itself of the increasing size of corporations and of the GOVERNMENT SECTOR; or the role of unions in a fast-changing economic process. These are large questions and would easily fill another book.

Even larger is the question of whether we should devote less time and energy to producing wealth and more to using our wealth to develop other aspects of our national and personal life. The world is still short of wealth. Many people do not even have enough to eat. This is partly a distribution problem but increased production is still necessary.

We already have at our disposal vast productive capacity and the ability to go on increasing that capacity at a faster and faster rate. The problem we must face now is three fold: how to increase production, how to improve distribution, and how to use wealth, looking forward to the time when more wealth and more leisure in which to use it will be available. The decisions we make now will affect not only our lives but the lives of future generations. It is therefore a matter of some importance to consider the relation between the various parts of the individual's and the nation's life.

The individual's and the nation's life is made up of the economic, the socio-political and the cultural. In addition, the individual may, if he chooses, develop his own spiritual life. The economic is put first, not because eating is the most important thing a man does, but because



Ontario businessmen carrying Ontario's trade campaign into the heart of Moscow.

unless he eats he is not free to do much else. In the same way, unless a society produces wealth, it is not free to make progress in other directions because it cannot afford to do this. But the economic process can produce material well-being and material well-being only. Anything else must be separately fostered. The individual must decide how much he will contribute to each part of his own life and his society's life. He must also contribute to his society's decisions about the uses it will make of its wealth. When each individual chooses to accept these responsibilities, true civilization can begin.

Ech. 2-6-68

